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Current Fishery Statistics No. 9100

Fisheries of the United States, 1991

May 1992



U.S. DEPARTMENT
OF COMMERCE

National Oceanic and
Atmospheric Administration

National Marine
Fisheries Service



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Fisheries of the United States, 1991

Prepared by:
Fisheries Statistics Division

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Silver Spring, MD
May 1992



U.S. DEPARTMENT OF COMMERCE

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National Oceanic and Atmospheric Administration

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National Marine Fisheries Service

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PREFACE

FISHERIES OF THE UNITED STATES, 1991

This publication is a preliminary report for 1991 on commercial and recreational fisheries of the United States and foreign catches in the U.S. Exclusive Economic Zone (EEZ). This annual report provides timely answers to frequently asked questions for the previous year.

SOURCES OF DATA

Information in this report came from many sources. Field offices of the National Marine Fisheries Service (NMFS), in cooperation with various States, collected and compiled data on U.S. commercial landings and processed fishery products. The NMFS field offices compiled data on the foreign catch from reports submitted by designated foreign officials. The NMFS Fisheries Statistics Division in Silver Spring, MD, managed the collection and compilation of recreational statistics, and tabulated and prepared all data for publication. Sources of other data appearing in this publication are: U.S. Bureau of the Census, U.S. Bureau of Labor Statistics, U.S. Coast Guard, U.S. Customs Service, U.S. Department of the Interior, U.S. Department of Agriculture, Food and Agriculture Organization (FAO) of the United Nations and the countries fishing in the U.S. EEZ.

PRELIMINARY AND FINAL DATA

Data on U.S. commercial and recreational landings, foreign catches, employment, prices, and production of processed products are preliminary for 1991. Final data will be published in Fishery Statistics of the United States and other NMFS Current Fishery Statistics publications.

The Fisheries Statistics Division of NMFS takes this opportunity to thank members of states, industry, and foreign nations who provided the data that made this publication possible.

Program leaders of the field offices were: Ronnee Schultz, New England, Middle Atlantic, and Chesapeake; Tony Frank, Great Lakes Fisheries Commission, Great Lakes States; Kenneth Harris, Ernest Snell, Guy Davenport, Lee Usie, and Margot Hightower for the South Atlantic and Gulf States; Patricia J. Donley, California and Hawaii; John K. Bishop, Oregon and Washington; and Jessica A. Gharrett, Alaska.

DEFINITIONS - (See Glossary)

As in past issues of this publication, the units of quantity and value are defined as follows: U.S. landings and foreign catch are shown in round weight (mollusk shells excluded), unless otherwise noted; quantities shown for U.S. imports and exports are in product weight, as reported by the U.S. Bureau of the Census, unless otherwise noted; the value of the U.S. domestic commercial catch is exvessel; the value for U.S. imports is generally the market value in the foreign (exporting) country and, therefore, excludes U.S. import duties, freight charges from the foreign country to the United States, and insurance; the value for exports is generally the value at the U.S. port of export, based on the selling price, including inland freight, insurance, and other charges. Countries and territories shown in the U.S. foreign trade section are established for statistical purposes in the Tariff Schedules of the United States Annotated (Tariff Commission) and reported by the U.S. Bureau of the Census.

SUGGESTIONS

The Fisheries Statistics Division wishes to provide the kinds of data sought by users of fishery statistics, and welcomes any comments or suggestions that will improve this publication.

Address all comments or questions to:

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A special thanks to Donald FitzGibbon for his assistance in preparing this publication.

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REVIEW

U.S. LANDINGS. Commercial landings (edible and industrial) by U.S. fishermen at ports in the 50 states were a record 9.5 billion pounds or 4.3 million metric tons valued at \$3.3 billion in 1991—an increase of 80.6 million pounds (less than 1 percent) but a decrease of \$213.7 million (down 6 percent) compared with 1990. The 1991 landings showed an increase in major species such as Pacific cod and hake, menhaden, salmon, flounders, lobsters, oysters, and total crabs when compared with 1990. The 1991 average exvessel price per pound paid to fishermen was 35 cents compared to the 37 cents they received in 1990. Finfish accounted for 84 percent of total landings, but only 51 percent of the total value.

Commercial landings by U.S. fishermen at ports outside the 50 states or transferred in the U.S. Exclusive Economic Zone (EEZ) onto foreign vessels (joint ventures) were an additional 657.1 million pounds (298,100 metric tons) valued at \$214.1 million. This was a 50 percent, or 655.2 million pounds (296,500 metric tons), decrease in quantity and a \$74.2 million (26 percent) decrease in value compared with 1990. Most of these landings consisted of tuna landed at canneries in Puerto Rico, American Samoa and other foreign ports and joint ventures for mackerel and menhaden. Joint venture catches decreased significantly (see below).

Edible fish and shellfish landings in the 50 states were 7.0 billion pounds (3.2 million metric tons) in 1991—a decrease of 10 million pounds (4,536 metric tons) compared with 1990. Landings of American lobsters, crabs, flounders, salmon, and Pacific cod increased while landings of shrimp, clams, Alaska pollock, and tuna decreased.

Landings for reduction and other industrial purposes were 2.5 billion pounds (1.1 million metric tons) in 1991—an increase of 5 percent compared with 1990.

The U.S. marine recreational finfish catch in 1991 on the Atlantic and Gulf coasts was an estimated 379.5 million fish taken on an estimated 59.1 million fishing trips. The harvested catch was estimated at 186.0 million fish weighing 233.0 million pounds.

JOINT VENTURE CATCH IN THE U.S. EEZ. Joint venture catches by U.S. fishermen unloaded onto foreign vessels were 56,300 metric tons (124.1 million pounds) valued at \$3.9 million. This was an 84 percent

decrease from 1990, when 363,100 metric tons (800.6 million pounds) valued at \$51.3 million were caught. The major species were sea herrings, mackerel, and menhaden.

FOREIGN CATCH IN U.S. EEZ. The foreign catch of fish (excluding tunas) and shellfish in the U.S. EEZ was 5,349 metric tons (11.8 million pounds) in 1991, a 42 percent decrease compared with 1990. The North Atlantic U.S. EEZ supplied 100 percent of the total. Atlantic mackerel was the primary species caught; small quantities of river herring, and other miscellaneous species were also reported.

U.S. VS. FOREIGN CATCH IN U.S. EEZ. The combined catch by U.S. and foreign vessels in the U.S. EEZ was 2.6 million metric tons in 1991—a decrease of 8,907 metric tons (1 percent) compared with 1990. The U.S. share was 99 percent of the total.

WORLD LANDINGS. In 1990, the most recent year for which data are available, world commercial fishery landings were 97.2 million metric tons—a decrease of 3.1 million metric tons (down 3 percent) compared with 1989. China was the leading nation with 12 percent of the total catch; USSR, second with 11 percent; Japan, third with 11 percent; Peru, fourth with 7 percent; the United States, fifth with 6 percent; and Chile, sixth with 6 percent.

PRICES. Price indices declined for 18 of the 33 species groups being tracked, and increased or remained constant for the remaining 15 species groups. The bluefin tuna price index had the largest increase (102 percent) while the pink salmon price index had the largest decrease (59 percent). The 1991 annual exvessel price index for edible fish and shellfish decreased 6 percent from 1990. The annual index for industrial fish decreased 20 percent from 1990.

PROCESSED PRODUCTS. The 1991 estimated value of the domestic production of edible and nonedible fishery products was a \$7.0 billion, \$394.5 million (5 percent) less than the \$7.4 billion in 1990. The value of edible products was \$6.6 billion—a decrease of \$454.1 million (6 percent) compared with 1990. The value of industrial products was \$413.1 million in 1991—an increase of \$59.6 million (17 percent) compared with 1990.

REVIEW

FOREIGN TRADE. The total import value of edible and nonedible fishery products was \$9.4 billion in 1991—an increase of \$387.4 million (4 percent) compared with 1990. Imports of edible fishery products (product weight) were 3.0 billion pounds (1.4 million metric tons) valued at \$5.7 billion in 1991—an increase of 130.2 million pounds (5 percent) and \$438.7 million (8 percent) compared with 1990. Imports of nonedible (i.e., industrial) products were \$3.8 billion—a decrease of \$51.3 million (1 percent) compared with 1990.

Total export value of edible and nonedible fishery products of domestic origin was a record \$6.2 billion in 1991—an increase of \$522.8 million (9 percent) compared with 1990. United States firms exported a record 2.0 billion pounds (916,400 metric tons) of edible products valued at a record \$3.0 billion—an increase of 109.9 million pounds (49,800 metric tons) and \$259.8 million compared with 1990. Exports of nonedible products were valued at a record \$3.1 billion, \$263.0 million more than 1990. The \$51.3 million received for U.S.-flag vessel catches transferred onto foreign vessels in the U.S. EEZ in joint venture operations are not included in the export statistics.

SUPPLY. The U.S. supply of edible fishery products (domestic landings plus imports, round weight equivalent) was 13.0 billion pounds (5.9 million metric tons) in 1991—an increase of 358.0 million pounds (3

percent) compared with 1990. The change reflects an increase of 7 percent in imports and a slight (less than 1 percent) decrease in domestic commercial landings. Domestic commercial landings for industrial products of 2.5 billion pounds (1.1 million metric tons) were 90 million pounds more than 1990. The supply of industrial fishery products was 3.3 billion pounds (1.5 million metric tons) in 1991—a decrease of 343.0 million pounds (9 percent) compared with 1990.

PER CAPITA CONSUMPTION. U.S. consumption of fishery products was 14.9 pounds of edible meat per person in 1991, down 0.1 from the revised 1990 per capita consumption of 15.0 pounds (See page 68).

CONSUMER EXPENDITURES. U.S. consumers spent an estimated \$26.8 billion for fishery products in 1991—an increase of \$122.4 million (less than 1 percent) compared with 1990. The 1991 total includes \$18.2 billion in expenditures in food service establishments (restaurants, carry-outs, caterers, etc.); \$8.4 billion in retail stores (for home consumption); and \$151.8 million for industrial fish products. In producing and marketing a variety of fishery products for domestic and foreign markets, the commercial marine fishing industry contributed \$16.5 billion (in value added) to the U.S. Gross National Product—a decrease of \$90.8 million (1 percent) compared with 1990.



REVIEW

OTHER IMPORTANT FACTS

Alaska pollock, with landings of 2.9 billion pounds (1.3 million metric tons), was the most important species in quantity and fourth in value for 1991, accounting for 30 percent of the commercial fishery landings in the United States.

Menhaden was the second most important species in quantity, but was low in value.

Salmon were third in quantity and third in value.

Crabs were fourth in quantity and second in value.

Cods were fifth in quantity and sixth in value.

Flounders were sixth in quantity and eighth in value.

Shrimp were first in value and seventh in quantity.

Relatively small quantities of lobsters and scallops were landed, but they ranked fifth and seventh in value, respectively.

Tuna landings by U.S.-flag vessels at ports outside the continental United States amounted to 484.2 million

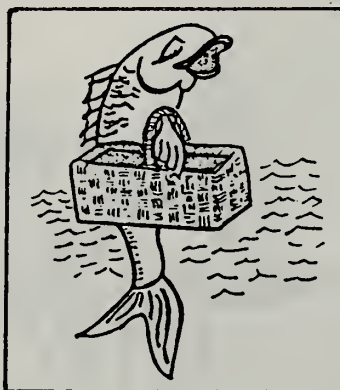
pounds. Shrimp and menhaden also were landed at ports outside the United States. Alewives, mackerel, sea herring, menhaden and sharks were species transferred on to foreign vessels in the U.S. EEZ in joint ventures.

Dutch Harbor-Unalaska, Alaska, was the leading U.S. port in quantity of commercial fishery landings, followed by Empire-Venice, Louisiana; Cameron, Louisiana; Kodiak, Alaska; and Pascagoula-Moss Point, Mississippi.

New Bedford, Massachusetts was the leading U.S. port in terms of value, followed by: Dutch Harbor-Unalaska, Alaska; Kodiak, Alaska; Brownsville-Port Isabel, Texas; and Dulac-Chauvin, Louisiana.

Alaska led all states in volume with landings of 5.1 billion pounds, followed by Louisiana, 1.2 billion; Virginia, 681.2 million; California, 348.2 million; and Massachusetts, 288.9 million pounds.

Alaska led all states in value with \$1.2 billion, followed by Massachusetts, \$295.8 million; Louisiana, \$243.6; Texas, \$214.4; and Florida, \$162.1 million.



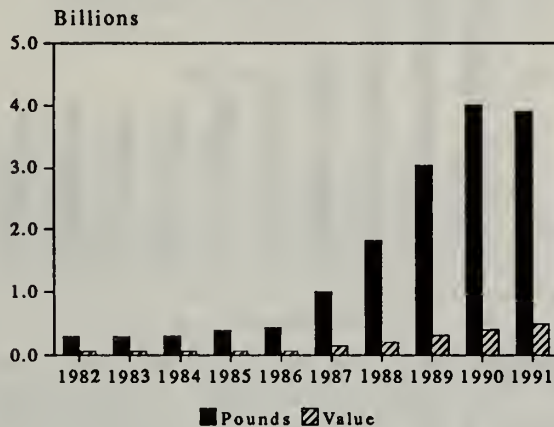
REVIEW

IMPORTANT SPECIES

ALASKA POLLOCK AND OTHER PACIFIC TRAWL FISH. U.S. landings of Pacific trawl fish (Pacific cod, flounders, hake, Pacific ocean perch, Alaska pollock, and rockfishes) were 3.9 billion pounds valued at \$469.9 million--a decrease of 3 percent in quantity compared with 1990.

Landings of Alaska pollock decreased 8 percent to 2.9 billion pounds, more than three times higher than the 1986-1990 5-year average. Landings of Pacific cod were 553.7 million pounds--an increase of 5 percent from 526.4 million pounds in 1990. Pacific hake (whiting) landings were 56.0 million pounds (up 164 percent) valued at \$3.7 million (up 200 percent from 1990) and more than twice the 5-year average. Landings of rockfishes were 97.5 million pounds (26 percent lower than 1990) valued at \$33.7 million. The 1991 rockfish landings were 11 percent lower than the 5-year average.

Trend in Commercial Landings, 1982-1991
Alaska Pollock, Other Pacific Trawl Fish



ANCHOVIES. U.S. landings of anchovies were 19.2 million pounds--an increase of 6.1 million pounds (46 percent) compared with 1990. Almost all landings were used for bait; less than one percent went into animal food.

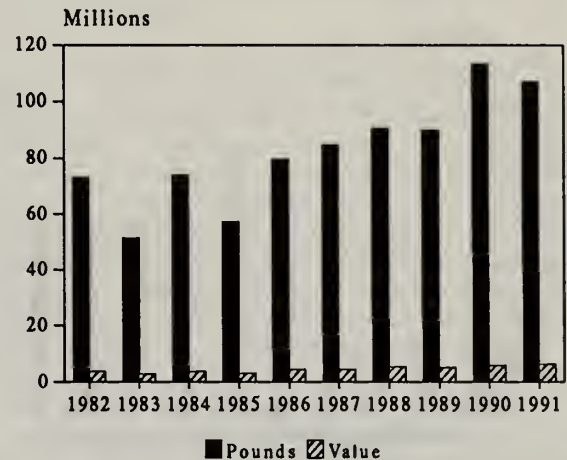
HALIBUT. U.S. landings of Atlantic and Pacific halibut were 66.3 million pounds (round weight) valued at \$99.5 million--a decrease of 4.1 million pounds (6 percent), but an increase of \$2.8 million (3 percent) compared with 1990. The Pacific fishery accounted for all but 69,000 pounds of the 1991 total halibut catch. The average exvessel price per pound in 1991 was \$1.50 compared with \$1.37 in 1990.

HERRING, SEA. U.S. commercial landings of sea herring were 230.2 million pounds valued at \$37.2 million--an

increase of 9.0 million pounds (4 percent) but a decrease of \$753,000 (2 percent) compared with 1990. Landings of Atlantic sea herring were 107.1 million pounds valued at \$6.3 million--a decrease of 6.0 million pounds (5 percent) but an increase of \$593,000 (10 percent) compared with 1990.

Landings of Pacific sea herring were 123.1 million pounds valued at \$30.8 million--an increase of 15.0 million pounds (14 percent) and a decrease of \$1.3 million (4 percent) compared with 1990. Alaskan landings were 105.2 million pounds valued at \$23.1 million--an increase of 15.5 million pounds (17 percent) but a decrease of \$900,000 (4 percent) compared with 1990.

Trend in Commercial Landings, 1982-1991
Atlantic Sea Herring



JACK MACKEREL. Landings of jack mackerel in 1991 were 3.6 million pounds valued at \$235,000--a decrease of 5.3 million pounds (60 percent) and \$300,000 (56 percent) compared with 1990. The 1991 average exvessel price per pound was 6 cents.

MACKEREL ATLANTIC. U.S. landings of Atlantic mackerel were 36.7 million pounds valued at \$5.5 million--an increase of 13.7 million pounds (60 percent) and \$1.7 million (44 percent) compared with 1990. New Jersey with 18.5 million pounds and Rhode Island with 13.6 million pounds had a total of 88 percent of the total landings. The average exvessel price per pound in 1991 was 15 cents, down 2 cents from 1990.

MACKEREL PACIFIC. Landings of Pacific mackerel were 63.3 million pounds valued at \$4.9 million--a decrease of 20.4 million pounds (24 percent) and \$209,000 (4 percent)

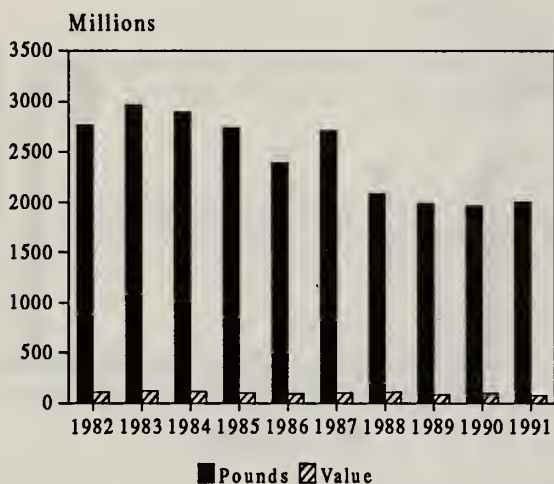
REVIEW

IMPORTANT SPECIES

compared with 1990. The average exvessel price per pound increased from 6 cents in 1990 to 8 cents in 1991.

MENHADEN. The U.S. menhaden landings were 2.0 billion pounds valued at \$77.7 million--an increase of 14.9 million pounds (1 percent) but a decrease of \$16.2 million (17 percent) compared with 1990. Landings decreased by 53.7 million pounds (7 percent) in the Atlantic States but increased 68.6 million pounds (6 percent) in the Gulf States compared with 1990. Landings along the Atlantic coast were 762.9 million pounds valued at \$36.4 million. Gulf region landings were 1.2 billion pounds valued at \$41.3 million. Menhaden are used primarily for the production of meal, oil, and solubles. Small quantities are used for bait and canned pet food.

Trend in Commercial Landings, 1982-1991
Atlantic and Gulf Menhaden



NORTH ATLANTIC TRAWL FISH. Landings of butterfish, Atlantic cod, cusk, flounders (blackback, fluke, yellowtail and other), haddock, red and white hake, ocean perch, pollock and whiting (silver hake) in the North Atlantic (combination of New England, Middle Atlantic, and Chesapeake Regions) were 241.7 million pounds valued at \$191.5 million--a decrease of 16.1 million pounds (6 percent) but an increase of \$22.4 million (13 percent) compared with 1990. Of these species, flounder led in total value in the North Atlantic accounting for 42 percent of the total; followed by cod, 39 percent; and whiting, 6 percent.

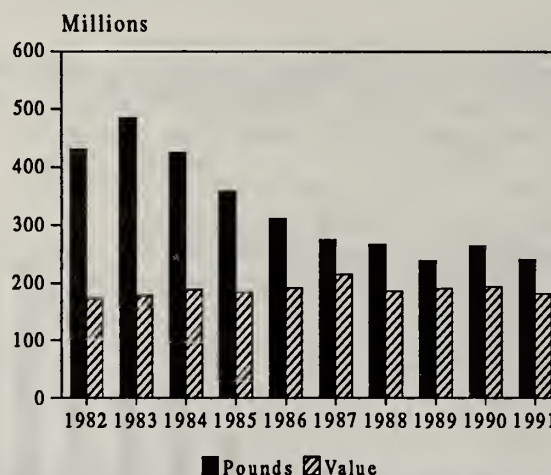
The 1991 landings of Atlantic cod were 92.6 million pounds valued at \$74.1 million--a decrease of 3.2 million pounds (3 percent) but an increase of \$12.8 million (21 percent) compared with 1990. The exvessel price per pound was 80 cents in 1991 compared with 64 cents per pound in 1990.

Landings of yellowtail flounder were 17.1 million pounds--a decrease of 14.6 million pounds (46 percent) but about equal to the 5-year average.

Haddock landings decreased to 4.1 million pounds (25 percent) and \$4.6 million (23 percent) compared to 1990.

North Atlantic pollock landings were 17.3 million pounds valued at \$9.9 million--a decrease of 3.7 million pounds (18 percent) and \$615,000 (6 percent) compared with 1990.

Trend in Commercial Landings, 1982-1991
North Atlantic Trawl Fish



PACIFIC SALMON. U.S. commercial landings of salmon were 783.3 million pounds valued at \$359.7 million--an increase of 50.1 million pounds (7 percent) but a decrease of \$252.6 million (41 percent) compared with 1990. Alaska and Washington accounted for 93 percent and 6 percent of the total landings, respectively. Red salmon landings were 268.8 million pounds valued at \$211.0 million--a decrease of 48.5 million pounds (15 percent) and \$185.4 million (47 percent) compared with 1990. King salmon landings decreased to 20.1 million pounds--down 5.6 million pounds (22 percent) from 1990. Pink salmon landings were 362.8 million pounds--an increase of 90.4 million pounds (33 percent); chum salmon, 76.2 million pounds, up 6.0 million pounds (9 percent); and silver salmon, 55.4 million pounds--increased 7.9 million pounds (17 percent) compared with 1990.

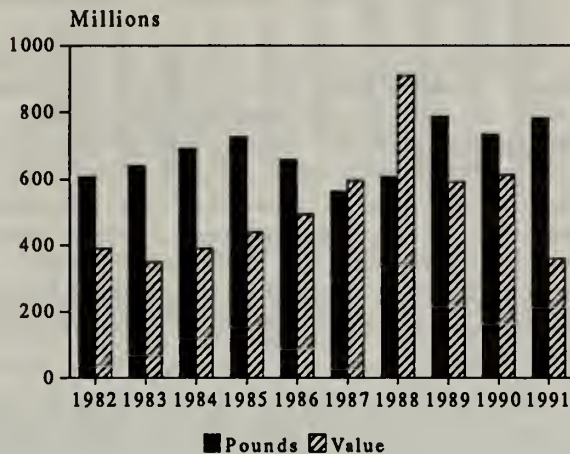
Alaska landings were 729.1 million pounds valued at \$311.6 million--an increase of 39.3 million pounds (6 percent) but a decrease of \$235.0 million (43 percent) compared with 1990. The distribution of Alaska salmon landings by species in 1991 was: sockeye, 259.0 million

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pounds (36 percent); pink, 349.3 million pounds (48 percent); chum, 66.1 million pounds (9 percent); coho, 43.9 million pounds (6 percent); and chinook, 10.8 million pounds (1 percent). The exvessel price per pound for all species in Alaska was 43 cents in 1991—a decrease of 36 cents from 1990.

Trend in Commercial Landings, 1982-1991
Pacific Salmon



Washington salmon landings were 45.0 million pounds valued at \$33.2 million—an increase of 11.7 million pounds (35 percent) but a decrease of \$12.9 million (28 percent) compared with 1990. The biennial fishery for pink salmon went from 30,000 pounds in 1990 to 13.5 million pounds in 1991. Washington landings of red salmon were 9.8 million pounds—a decrease of 2.1 million pounds (down 18 percent); followed by chum, 10.1 million pounds (up 34 percent); silver, 7.3 million pounds (down 8 percent); and chinook, 4.4 million pounds (down 27 percent) compared with 1990. The average exvessel price per pound for all species in Washington decreased from \$1.38 in 1990 to \$0.74 in 1991.

Oregon salmon landings were 5.2 million pounds valued at \$5.7 million—a decrease of 37,000 pounds (1 percent) and \$1.6 million (22 percent) compared with 1990. Landings of chinook salmon were 1.8 million pounds (down 57 percent); silver, 3.4 million pounds (up 226 percent); and chum, 1,000 pounds (down 75 percent from the 4,000 pounds reported in 1990). The average exvessel price per pound for all species in Oregon decreased from \$1.41 in 1990 to \$1.10 cents in 1991.

California salmon landings were 3.7 million pounds valued at \$9.0 million—a decrease of 734,000 pounds (17 percent) and \$3.0 million (25 percent) com-

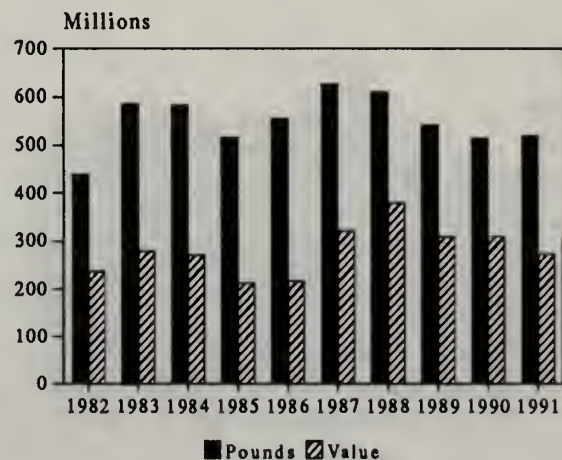
pared with 1990. Chinook salmon landings were 3.2 million pounds valued at \$8.3 million—a decrease of 883,000 pounds (22 percent) and \$3.1 million (27 percent) compared with 1990. Landings of silver salmon increased to 460,000 pounds (48 percent) and \$701,000 (14 percent) compared with 1990. The average exvessel price per pound paid to fishermen for all species in 1991 was \$2.44 compared with \$2.71 in 1990.

SABLEFISH. U.S. commercial landings of sablefish were 83.6 million pounds valued at \$78.2 million—a decrease of 6.2 million pounds (7 percent) but an increase of \$19.3 million (33 percent) compared with 1990. Landings decreased in Alaska to 62.2 million pounds (11 percent) compared with 1990. Landings increased in Washington to 5.5 million pounds (30 percent), but remained stable in California at 7.2 million pounds (no change) compared with 1990. The 1991 Oregon catch of 8.7 million pounds was 5 percent more than the 1990 catch. The average exvessel price per pound in 1991 was 93 cents compared with 66 cents in 1990.

TUNA. Landings of tuna by U.S. fishermen at ports in the 50 United States, Puerto Rico, American Samoa, other U.S. territories, and foreign ports were 519.9 million pounds valued at \$273.7 million—an increase of 6.1 million pounds (1 percent) but a decrease of \$36.1 million (12 percent) compared with 1990. Species composition and value of tuna landings changed in 1991 in response to changes in fishing areas. Fishing activity moved from the eastern Pacific Ocean to avoid tuna and porpoise conflicts. The average exvessel price per pound of all species of tuna in 1991 was 53 cents compared with 60 cents in 1990.

Bigeye landings in 1991 were 5.2 million pounds—an increase of 181,000 pounds (4 percent) compared

Trend in Commercial Landings, 1982-1991
Tuna (Includes U.S. and Foreign Ports)



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with 1990. The average exvessel price per pound was \$3.78 in 1991 compared with \$3.52 in 1990.

Skipjack landings were 391.5 million pounds—an increase of 139.0 million pounds (55 percent) compared with 1990. The average exvessel price per pound was 40 cents in 1991, compared to 41 cents in 1990.

Yellowfin landings were 105.6 million pounds—a decrease of 127.6 million pounds (55 percent) compared with 1990. The average exvessel price per pound was 66 cents in 1991 compared with 63 cents in 1990.

Bluefin landings were 1.9 million pounds—a decrease of 3.7 million pounds (66 percent) compared with 1990. The average exvessel price per pound in 1991 was \$9.11 compared with \$4.50 in 1990.

CLAMS. Landings of all species yielded 134.2 million pounds of meats valued at \$125.3 million—a decrease of 5.0 million pounds (4 percent) and \$4.9 million (4 percent) compared with 1990. The average exvessel price per pound decreased to 93 cents in 1991 from 94 cents in 1990.

Surf clams yielded 66.2 million pounds of meats valued at \$29.2 million—a decrease of 5.6 million pounds (8 percent) and \$3.1 million (9 percent) compared with 1990. New Jersey was the leading State with 46.0 million pounds (up 2 percent), followed by New York, 12.1 million pounds (down 4 percent); and Maryland, 6.7 million pounds (up 8 percent) compared with 1990. The average exvessel price per pound of meats was 44 cents in 1991, down 1 cent from 1990.

Trend in Commercial Landings, 1982-1991
Clams



The ocean quahog fishery produced 49.1 million pounds of meats valued at \$19.0 million—an increase of 2.4 million pounds (5 percent) and \$2.8 million (18 percent) compared with 1990. New Jersey was the leading producer with 34.7 million pounds of meats accounting for 71 percent of the total ocean quahog landings. The value for New Jersey in 1991 was \$11.6 million—an increase of \$1.4 million (14 percent) compared with 1990. The average exvessel price per pound of meats was 39 cents in 1991, compared with 35 cents in 1990.

The hard clam fishery produced 12.3 million pounds of meats valued at \$58.5 million—an increase of 2.5 million pounds (25 percent) and \$16.6 million (40 percent) compared with 1990. Landings in the New England region were 4.9 million pounds of meats (up 20 percent); Middle Atlantic region, 3.6 million pounds (up 180 percent); Chesapeake region, 1.2 million pounds (down 22 percent); and the South Atlantic region, 1.7 million pounds (down 12 percent). The average exvessel price per pound of meats increased from \$4.26 in 1990 to \$4.75 in 1991.

Soft clams yielded 4.2 million pounds of meats valued at \$14.8 million—a decrease of 1.5 million pounds (27 percent) and \$7.5 million (34 percent) compared with 1990. Maryland was the leading State with 1.7 million pounds of meats (down 21 percent) followed by Maine with 1.5 million pounds (down 41 percent). The average exvessel price per pound of meats was \$3.51 in 1991, compared with \$3.88 in 1990.

CRABS. Landings of all species of crabs were 650.0 million pounds valued at \$414.8 million—an increase of 150.6 million pounds (30 percent) but a decrease of \$69.0 million (14 percent) compared with 1990.

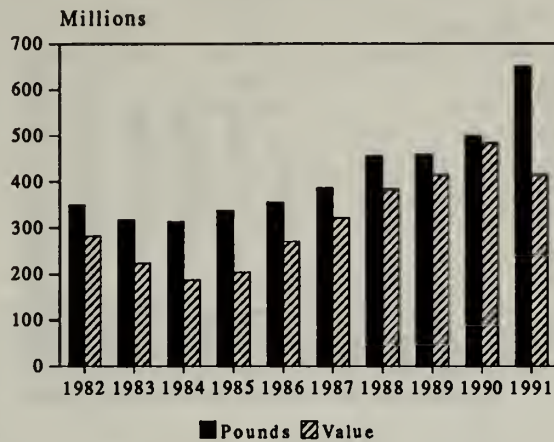
Hard blue crab landings were 222.1 million pounds valued at \$73.3 million—an increase of 20.2 million pounds (10 percent) but a decrease of \$4.1 million (5 percent) compared with 1990. Maryland landed 23 percent, while Virginia and Louisiana each landed 20 percent of the total U.S. landings. Hard blue crab landings in the Chesapeake region were 94.9 million pounds—an increase of 5 percent; Gulf, 59.0 million pounds, increased 30 percent; and the South Atlantic region with 56.9 million pounds, increased 5 percent. The Middle Atlantic region with 11.3 million pounds valued at \$5.0 million showed a decrease of 750,000 pounds (6 percent) and \$72,000 (1 percent) compared with 1990. The average exvessel price per pound of hard blue crabs was 33 cents in 1991, five cents less than 1990.

Dungeness crab landings were 22.3 million pounds valued at \$33.5 million—a decrease of 9.1 million pounds (29 percent) and \$14.6 million (30 percent) com-

REVIEW

IMPORTANT SPECIES

Trend in Commercial Landings, 1982-1991
Crabs



pared with 1990. Alaska landings of 8.0 million pounds (up 1 percent) led all states with 47 percent of the total landings. Washington landings were 5.9 million pounds, down 33 percent compared with 1990. Oregon landings were 4.9 million pounds (down 48 percent) and California landings were 3.5 million pounds (up 23 percent) compared with 1990. The average exvessel price per pound was \$1.50 in 1991 compared with \$1.53 in 1990.

U.S. landings of king crab were 28.1 million pounds valued at \$82.8 million--a decrease of 5.8 million pounds (17 percent) compared with 1990. The average exvessel price per pound in 1991 was \$2.94 compared with \$4.33 in 1990.

Snow (tanner) crab landings were 357.1 million pounds valued at \$200.2 million--an increase of 143.7 million pounds (67 percent) and \$14.0 million (8 percent) compared with 1990. The average exvessel price per pound was 56 cents in 1991, down from 87 cents in 1990.

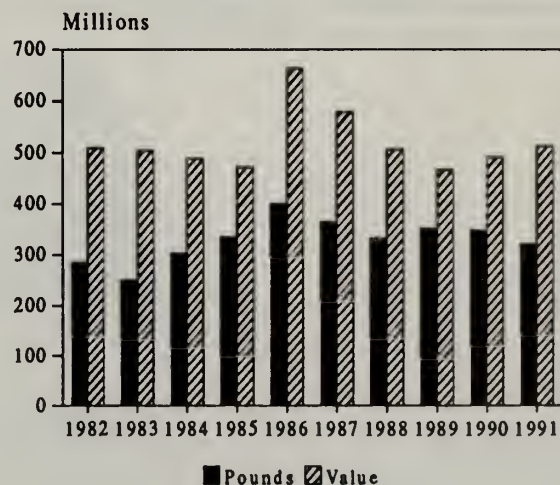
LOBSTER, AMERICAN. American lobster landings were 63.3 million pounds valued at \$165.0 million--an increase of 2.3 million pounds (4 percent) and \$10.3 million (7 percent) compared with 1990. Maine led in landings for the ninth consecutive year, with 30.8 million pounds valued at \$72.3 million--an increase of 2.7 million pounds (10 percent) compared with 1990. Massachusetts, the second leading producer, had landings of 15.9 million pounds valued at \$44.7 million--an increase of 58,000 pounds (less than 1 percent) compared with 1990. Together Maine and Massachusetts produced 74 percent of the total national landings. The average exvessel price per pound was \$2.61 in 1991 compared with \$2.53 in 1990.

LOBSTERS, SPINY. U.S. landings of spiny lobster were 7.1 million pounds valued at \$32.1 million--a decrease of 24,000 pounds (less than 1 percent) and an increase of \$8.9 million (38 percent) compared with 1990. Florida, with landings of 6.3 million pounds valued at \$27.5 million, accounted for 89 percent of the total catch and 86 percent of the value. This was an increase of 599,000 pounds (10 percent) and \$11.9 million (76 percent) compared with 1990. Overall the average exvessel price per pound was \$4.53 in 1991 compared with \$3.27 in 1990.

OYSTERS. U.S. oyster landings yielded 31.9 million pounds of meats valued at \$98.0 million--an increase of 2.7 million pounds (9 percent) and \$4.3 million (5 percent) compared with 1990. The Gulf region led in production with 13.0 million pounds of meats, 41 percent of the national total; followed by the Pacific region (principally Washington with 81 percent of the region's total volume) with 9.9 million pounds (31 percent), and the New England region, with 4.2 million pounds (13 percent). The average exvessel price per pound of meats was \$3.08 in 1991 compared with \$3.21 in 1990.

SHRIMP. U.S. landings of shrimp were 320.1 million pounds valued at \$512.8 million--a decrease of 26.4 million pounds (8 percent), but an increase of \$21.4 million (4 percent) compared with 1990. Shrimp landings increased in the South Atlantic (up 29 percent), but declined in New England (down 23 percent), Gulf (down 8 percent), and the Pacific (down 18 percent), when compared with 1990. The average exvessel price per pound of shrimp increased to \$1.60 in 1991 compared with \$1.42 in 1990.

Trend in Commercial Landings, 1982-1991
Shrimp



REVIEW

IMPORTANT SPECIES

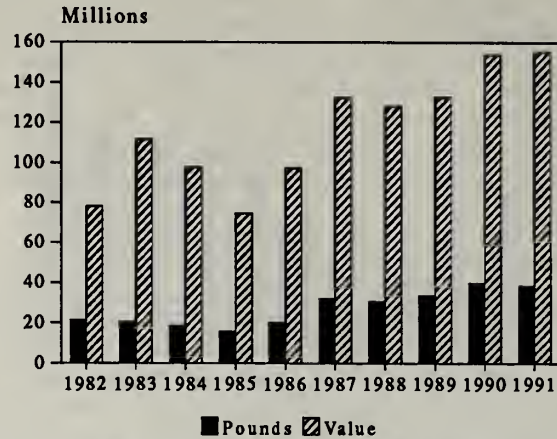
Gulf region landings were the Nation's largest with 228.9 million pounds compared with 249.5 million pounds in 1990. Texas led all Gulf states with 95.8 million pounds (up 10 percent), followed by Louisiana, 95.1 million pounds (down 20 percent); Alabama, 14.9 million pounds (down less than 1 percent); Mississippi, 11.8 million pounds (down 23 percent); and Florida (West Coast), 11.3 million pounds (down 15 percent). In the Pacific region Oregon was the third leading State nationwide with landings of 21.7 million pounds (down 32 percent). California landings of 12.5 million pounds increased 36 percent and Washington landings of 10.2 million pounds decreased 25 percent compared with 1990.

SCALLOPS. U.S. landings of all species of scallops were 40.0 million pounds of meats valued at \$162.5 million--a decrease of 1.6 million pounds (4 percent) but an increase of \$4.4 million (3 percent) compared with 1990. The average exvessel price per pound of meats increased from \$3.80 in 1990 to \$4.06 in 1991.

Bay scallop landings were 438,000 pounds of meats valued at \$2.7 million--a decrease of 101,000 pounds (19 percent) and \$436,000 (14 percent) compared with 1990. Massachusetts was the leading state with 375,000 pounds of meats, 86 percent of the national total. The average exvessel price per pound of meats was \$6.09 in 1991 compared with \$5.76 in 1990.

Sea scallop landings were 39.3 million pounds of meats valued at \$158.9 million--a decrease of 615,000 pounds (2 percent) but an increase of \$5.2 million (3 percent) compared with 1990. Massachusetts was also the leading state in landings of sea scallops with 21.9 million pounds of meats, 56 percent of the national total. The average exvessel price per pound of meats in 1991 was \$4.04 compared with \$3.85 in 1990.

Trend in Commercial Landings, 1982-1991
Atlantic Sea Scallops



Landings of calico scallops were 286,000 pounds of meats valued at \$858,000--a decrease of 849,000 pounds (75 percent) and \$423,000 (33 percent) compared with 1990. All calico scallops were landed on the east coast of Florida in 1991. The average exvessel price per pound of meats was \$3.00 in 1991 compared with \$1.13 in 1990.

SQUID. U.S. commercial landings of squid were 139.6 million pounds valued at \$35.6 million--an increase of 43.7 million pounds (46 percent) and \$11.8 million (50 percent) compared with 1990. California was the leading state with 68.1 million pounds, 49 percent of the national total. The New England region landings were 41.8 million pounds (up 16 percent), followed by the Middle Atlantic region, 26.4 million pounds (up 23 percent), and the Chesapeake Region, 2.7 million pounds (up 26 percent) compared with 1990. The average exvessel price per pound for squid was 26 cents in 1991, compared with 25 cents in 1990.

REVIEW

PER CAPITA CONSUMPTION

The NMFS calculation of per capita consumption is based on a "disappearance" model: the total U.S. supply of imports and landings is converted to edible weight; decreases in supply such as exports and inventories are subtracted out; the remaining total is divided by a population value to estimate per capita consumption. Data for the model are derived primarily from secondary sources or voluntary surveys of the U.S. fishing industry. Incomplete reporting, changes in source data or invalid model assumptions may each have a significant effect on the resulting calculation.

The per capita consumption model was modified in 1990 to reflect institutional changes in the seafood industry, including a rapid expansion in the domestic production and export of surimi. After these modifications were made the model was recalculated for the years 1980 through 1990 to maximize the utility of the time series. This represents the time period when industry changes caused long-standing model assumptions to become invalid. Two principal modifications have been made to the program: the method in which disappearance of round tuna for canning is calculated, and a change in the conversion factor for surimi produced from Alaska pollock.

To calculate the fresh and frozen component of per capita, the U.S. catch of tuna is subtracted from the total U.S. landings since almost all the tuna landings are destined for canning. Prior to 1990 the total U.S. harvest of tuna, regardless of its port of offloading, was subtracted from the fresh and frozen component of the model. Over the last 10 years, there has been a shift in the tuna industry to where the majority of the catch is now

landed outside the 50 states, which is beyond the area for which the model calculates fresh and frozen supply for consumption. The 1990 modification to the model now includes only tuna landed in the 50 States. The change retains more seafood in the fresh and frozen component, raising the per capita calculation.

The second modification was to more accurately account for the dramatic growth in U.S. surimi production from 1987 - 1990, which now accounts for approximately 38 percent of the domestic round fish utilized for fresh and frozen consumption. In 1989, a 22 percent yield of surimi per pound of round fish was utilized. Latest data from the industry indicates that at-sea processors yield approximately 15 percent while shore based operations yield 20 percent. The net effect of the conversion factor change lowers overall consumption for the years in which surimi was produced.

U.S. per capita consumption of fish and shellfish was 14.9 pounds (edible meat) in 1991. This total was 0.1 pounds less than the revised figure of 15.0 pounds consumed in 1990. Per capita consumption of fresh and frozen products was 9.7 pounds, an increase of 0.1 pounds from 1990. Fresh and frozen finfish accounted for 6.0 pounds while fresh and frozen shellfish consumption was 3.7 pounds per capita. The fresh and frozen finfish includes approximately 0.8 pounds of farm raised catfish. Consumption of canned fishery products was 4.9 pounds per capita in 1991, a decrease of 0.2 pounds from 1990.

Per Capita Use. The per capita use of all fishery products (edible and industrial) in 1991 was 64.5 pounds (round weight), down 0.5 pound compared with 1990.



REVIEW

PROCESSED FISHERY PRODUCTS

FRESH AND FROZEN

FISH FILLETS AND STEAKS. In 1991 the U.S. production of raw (uncooked) fish fillets and steaks, including blocks, was 402.4 million pounds--38.3 million pounds less than the 440.7 million pounds in 1990. These fillets and steaks were valued at \$822.8 million--\$20.5 million less than 1990. Alaska pollock fillets and blocks led all species with 160.6 million pounds--40 percent of the total. Production of groundfish fillets and steaks (see Glossary Section-Groundfish) was 276.6 million pounds compared with 258.8 million pounds in 1990.

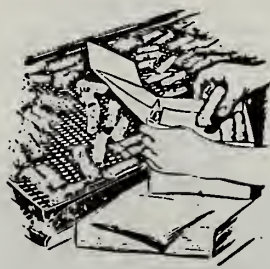
FISH STICKS AND PORTIONS. The combined production of fish sticks and portions was 247.5 million pounds valued at \$354.9 million compared with the 1990 production of 308.0 million pounds valued at \$427.5 million--a decrease of 60.5 million pounds and \$72.5 million.

The total production of fish sticks amounted to 63.3 million pounds valued at \$77.9 million--a decrease of 1.9 million pounds but an increase of \$3.0 million compared with 1990. The total production of fish portions amounted to 184.2 million pounds valued

at \$277.0 million--a decrease of 58.5 million pounds in quantity and \$75.5 million compared with 1990.

BREADED SHRIMP. The production of breaded shrimp in 1991 was 115.9 million pounds valued at \$334.8 million, compared with the 1990 production of 110.8 million pounds valued at \$353.3 million.

FROZEN FISHERY TRADE. In 1991, stocks of frozen fishery products in cold storage were at a low of 266.6 million pounds on March 31 and a high of 394.1 million pounds on November 30. Cold storage holdings of shrimp products were at a high of 58.4 million pounds on October 31 and a low of 41.9 million pounds on April 30. Saltwater fillets and steaks holdings reached a high of 78.6 million pounds on November 30 and were at a low of 48.7 million pounds on March 31. Holdings of blocks and slabs were at a high of 64.0 million pounds on December 31 and at a low of 23.0 million pounds on April 30. Surimi holdings reached a high of 20.8 million pounds on September 30 and were at a low of 10.3 million pounds on June 30. Cold storage holdings showed a decrease for the first six months when compared with 1990.



REVIEW

PROCESSED FISHERY PRODUCTS

CANNED FISHERY PRODUCTS

CANNED FISHERY PRODUCTS. The pack of canned fishery products in the 50 states, American Samoa, and Puerto Rico was 50.2 million standard cases (1.4 billion pounds) valued at \$1.6 billion--an increase of 5.0 million standard cases (207.4 million pounds), and \$82.5 million compared with the 1990 pack. The 1991 pack included 41.7 million cases (981.3 million pounds) valued at \$1.4 billion for human consumption, and 8.4 million standard cases (404.4 million pounds) valued at \$204.9 million for bait and animal food.

CANNED SALMON. The 1991 U.S. pack of natural Pacific salmon was 4.1 million standard cases (195.7 million pounds) valued at \$412.9 million, compared with 4.1 million standard cases (196.4 million pounds) valued at \$366.0 million packed in 1990. Alaskan plants accounted for 94 percent in quantity and 95 percent in value of the salmon pack.

CANNED SARDINES. The pack of Maine sardines (sea herring) was 597,675 standard cases (14.0 million pounds) valued at \$18.7 million, an increase of 31,852 standard cases (746,000 pounds) and \$1.4 million compared with 1990. An additional 248,740 standard cases (5.8 million pounds) of herring valued at \$8.4 million were packed in 1991 -- 940 standard cases (22,000 pounds) and \$1.3 million less than the 1990 pack.

CANNED TUNA. The U.S. pack of tuna was 30.4 million standard cases (592.8 million pounds) valued at \$876.6 million--an increase of 629,332 standard cases (12.2

million pounds) in quantity, and a decrease of \$25.5 million in value compared with the 1990 pack. The pack of albacore tuna was 6.2 million standard cases--522,000 standard cases less than the 6.8 million standard cases produced in 1990. Albacore tuna was 21 percent of the tuna pack in 1991. Lightmeat tuna (bigeye, bluefin, skipjack, and yellowfin) comprised the remainder with a pack of 24.2 million standard cases--1.2 million standard cases more than the 23.0 million standard cases packed in 1990.

CANNED CLAMS. The 1991 U.S. pack of clams (whole, minced, chowder, juice and specialties) was 5.4 million standard cases (129.0 million pounds) valued at \$83.9 million--an increase of 695,963 standard cases (19.3 million pounds) and \$7.5 million more than the pack in 1990. The pack of whole and minced clams were 2.5 million standard cases (154,422 standard cases more than the 1990 pack) and accounted for 46 percent of the total clam pack. Clam chowder and clam juice (2.7 million standard cases) made up the majority of the remaining pack.

CANNED SHRIMP. The U.S. pack of natural shrimp was 93,675 standard cases (632,000 pounds) valued at \$3.8 million--a decrease of 11,570 standard cases (78,000 pounds) but an increase of \$959,000 in value compared with the 1990 pack.

OTHER CANNED ITEMS. The pack of pet food was 8.4 million standard cases valued at \$204.4 million--an increase of 3.8 million standard cases compared with pack in 1990.



REVIEW

PROCESSED FISHERY PRODUCTS

INDUSTRIAL FISHERY PRODUCTS

INDUSTRIAL FISHERY PRODUCTS. The value of the domestic production of Industrial fishery products was \$208.2 million—an increase of \$1.6 million compared with the 1990 value of \$206.6 million. The leading state was Louisiana (\$70.1 million) which accounted for 34 percent of the total U.S. value for 1991.

FISH MEAL. The domestic production of fish and shellfish meal was 612.7 million pounds valued at \$128.1 million—an increase of 35.2 million pounds and \$7.4 million compared with 1990. Menhaden meal production was 465.7 million pounds valued at \$86.4 million—an increase of 17.7 million pounds and \$8.9 million compared with 1990. Menhaden accounted for 76 percent of the 1991 production of meal. Shellfish meal production was 13.8 million pounds—a decrease of 8.6 million pounds from the 1990 level. Tuna and mackerel meal production was 66.0 million pounds—a decrease of 274,000 pounds from 1990. Production of unclassified meal (consisting mainly of Alaska pollock and unclassified fish) was 67.3 million pounds—an increase of 26.4 million pounds compared with 1990.

FISH SOLUBLES. Domestic production of fish solubles was 169.6 million pounds, 16.1 million pounds less than the 1990 production.

FISH OILS. The domestic production of fish oils was 267.3 million pounds valued at \$30.3 million—a decrease of 14.6 million pounds but an increase of \$1.3 million in value compared with 1990 production. The production of menhaden oil was 263.5 million pounds valued at \$29.8 million—a decrease of 10.5 million pounds but an increase of \$1.6 million compared with 1990. Menhaden oil accounted for 99 percent of the volume and value of the total 1991 fish oil production. Unclassified oil production decreased by 4.1 million.

OTHER INDUSTRIAL PRODUCTS. Oyster shell products, together with agar-agar, animal feeds, crab and clam shells processed for food serving, fish pellets, Irish moss extracts, kelp products, dry and liquid fertilizers, pearl essence, and mussel shell buttons were valued at \$37.7 million, compared with \$42.8 million in 1990—a decrease of \$5.1 million.



REVIEW

FOREIGN TRADE IN FISHERY PRODUCTS

IMPORTS. U.S. imports of edible fishery products in 1991 were valued at \$5.7 billion, \$438.7 million more than in 1990. The quantity of edible imports was 3.0 billion pounds, 130.2 million pounds higher than the quantity imported in 1990.

The quantity of shrimp imported in 1991 was 540.0 million pounds, 38.2 million pounds more than the quantity imported in 1990. Valued at \$1.9 billion, \$198.0 million more than the 1990 value, shrimp imports accounted for 33 percent of the value of total edible imports. Imports of fresh and frozen tuna were 495.5 million pounds, 41.8 million pounds more than the 453.7 million pounds imported in 1990. Imports of canned tuna were 351.7 million pounds, 67.2 million pounds more than the 284.6 million pounds imported in 1990. Imports of fresh and frozen fillets and steaks amounted to 440.0 million pounds, a decrease of 18.4 million pounds from 1990. Regular and minced block imports were 290.5 million pounds, an increase of 26.0 million pounds from 1990. Edible imports consisted of 2.4 billion pounds of fresh and frozen products valued at \$4.9 billion, 513.3 million pounds of canned products valued at \$641.7 million, 68.2 million pounds of cured products valued at \$125.6 million, 2.6 million pounds of caviar and roe products valued at \$14.9 million, and 11.9 million pounds of other products valued at \$30.8 million.

Imports of nonedible fishery products were valued at \$3.8 billion—a decrease of \$51.3 million compared with 1990. The total value of edible and

nonedible products was \$9.4 billion in 1991, \$387.4 million more than in 1990 when \$9.0 billion of fishery products were imported.

EXPORTS. U.S. exports of edible fishery products of domestic origin were a record 2.0 billion pounds valued at a record \$3.0 billion, compared with exports of 1.9 billion pounds valued at \$2.8 billion in 1990. The \$1.2 million received for U.S.-flag vessel catches transferred onto foreign vessels in the U.S. Exclusive Economic Zone joint venture operations are not included in the export statistics.

Fresh and frozen items were 1.7 billion pounds valued at \$2.3 billion, an increase of 37.1 million pounds and \$10.3 million compared with 1990. In terms of individual species, fresh and frozen exports consisted principally of 255.5 million pounds of salmon valued at \$437.0 million and 179.2 million pounds of crabs valued at \$424.0 million. Canned items were 148.4 million pounds valued at \$268.9 million. Salmon was the major canned item exported, with 66.0 million pounds valued at \$133.6 million. Cured items were 23.2 million pounds valued at \$44.9 million. Caviar and roe exports were 99.0 million pounds valued at \$376.4 million, an increase of 28.6 million pounds and \$152.6 million compared with 1990.

Exports of nonedible products were valued at a record \$3.1 billion compared with \$2.9 billion in 1990. Exports of fishmeal amounted to 205.0 million pounds valued at \$59.2 million. The total value of edible and nonedible exports was \$6.2 billion—an increase of \$522.8 million compared with 1990.



U.S. COMMERCIAL LANDINGS BY REGION



U.S. COMMERCIAL LANDINGS

1

U.S. DOMESTIC LANDINGS, BY SPECIES, 1990 AND 1991 (1)

Species	1990		1991		Aver. (1986-90)
Fish	Thousand pounds	Thousand dollars	Thousand pounds	Thousand dollars	Thousand pounds
Alewives:					
Atlantic and Gulf.	3,089	411	3,628	300	7,955
Great Lakes.....	14,141	212	10,528	83	15,739
Anchovies.....	13,189	2,723	19,245	6,813	13,335
Bluefish.....	13,802	3,239	13,232	2,731	14,044
Bonito.....	8,272	1,778	1,464	397	5,890
Butterfish.....	6,532	3,334	6,181	3,171	8,610
Cod:					
Atlantic.....	95,881	61,329	92,636	74,093	71,511
Pacific.....	526,396	91,384	553,716	122,150	206,934
Croaker.....	6,720	3,390	4,761	2,146	10,681
Cusk.....	2,702	1,229	3,300	1,676	3,368
Flounders:					
Atlantic and Gulf:					
Blackback.....	14,821	16,395	16,424	18,600	18,521
Fluke.....	11,971	21,078	18,190	24,500	30,663
Yellowtail.....	31,682	28,060	17,132	17,764	17,509
Other.....	13,949	14,164	23,275	21,535	30,575
Pacific.....	182,096	33,224	329,934	62,390	101,849
Total.....	254,519	112,921	404,955	144,789	199,118
Groupers.....	12,223	20,603	10,738	19,824	12,144
Haddock.....	5,440	5,967	4,053	4,581	8,459
Hake:					
Pacific (whiting).....	21,232	1,229	55,964	3,692	22,604
Red.....	3,875	715	3,696	823	4,069
White.....	11,419	4,466	12,740	5,571	13,523
Halibut.....	70,454	96,700	66,339	99,532	74,319
Herring, sea:					
Atlantic.....	113,095	5,746	107,067	6,339	80,221
Pacific.....	108,120	32,178	123,141	30,832	129,243
Jack mackerel.....	8,959	535	3,618	235	24,433
Lingcod.....	7,295	2,555	8,275	2,873	7,250
Mackerel:					
Atlantic.....	22,962	3,794	36,700	5,476	11,696
King.....	4,253	4,771	4,281	5,119	4,693
Pacific.....	83,721	5,081	63,336	4,872	88,732
Spanish.....	5,778	2,585	7,476	3,706	6,020
Menhaden:					
Atlantic.....	816,669	39,534	762,935	36,386	689,892
Gulf.....	1,145,491	54,362	1,214,125	41,308	1,693,676
Total.....	1,962,160	93,896	1,977,060	77,694	2,383,569
Mullets.....	28,554	12,738	28,717	10,569	27,442
Ocean perch:					
Atlantic.....	1,322	703	1,176	543	4,837
Pacific.....	60,972	8,493	29,994	6,445	15,770
Pollock:					
Atlantic.....	21,042	10,516	17,344	9,901	39,978
Alaska.....	3,108,031	268,344	2,855,316	241,551	878,909
Rockfishes.....	131,545	38,504	97,466	33,692	109,934
Sablefish.....	89,802	58,865	83,610	78,166	91,209
Salmon, Pacific:					
Chinook or king...	25,753	47,228	20,143	36,983	35,022
Chum or keta.....	70,199	34,299	76,182	24,884	96,086
Pink.....	272,392	84,964	362,816	47,055	260,296
Red or sockeye....	317,315	396,420	268,793	210,995	227,957
Silver or coho....	47,487	49,456	55,351	39,803	48,540
Total.....	733,146	612,367	783,285	359,720	667,900
Scup or porgy.....	11,452	8,677	16,145	9,127	14,082
Sea bass:					
Black.....	4,885	5,312	3,910	4,608	4,472
White.....	123	265	163	340	108
Sea trout:					
Gray.....	9,880	5,777	8,668	4,854	17,930
Spotted.....	1,717	2,240	2,886	3,493	3,152
White.....	272	198	219	122	487
Sharks:					
Dogfish.....	35,793	3,801	34,376	3,444	11,944
Other.....	15,014	8,338	12,631	7,154	10,199

See notes at end of table.

(Continued)

U.S. COMMERCIAL LANDINGS

U.S. DOMESTIC LANDINGS, BY SPECIES, 1990 AND 1991 (1) - Continued

Species	1990		1991		Aver. (1986-90)
	Thousand pounds	Thousand dollars	Thousand pounds	Thousand dollars	Thousand pounds
Fish - Continued:					
Snapper:					
Red.....	3,101	8,411	2,358	5,681	4,304
Other.....	7,122	12,838	7,324	14,134	5,479
Striped bass.....	1,055	1,453	726	1,138	532
Swordfish.....	13,797	40,851	17,963	50,155	11,255
Tilefish.....	3,400	5,770	4,090	6,193	5,326
Tuna:					
Albacore.....	7,331	6,319	4,569	3,780	11,012
Bigeye.....	4,820	17,640	5,231	19,791	2,852
Bluefin.....	5,515	24,836	1,865	16,998	8,470
Skipjack.....	7,398	6,347	6,867	4,293	14,537
Yellowfin.....	36,280	48,876	16,019	29,542	58,339
Unclassified.....	1,049	1,022	1,144	649	926
Total.....	62,393	105,040	35,695	75,053	96,137
Whiting.....	44,500	11,281	36,533	11,219	38,813
Other marine finfishes.....	285,786	87,308	286,051	92,190	-
Other freshwater finfishes.....	30,135	19,236	28,498	20,901	-
Total, fish....	8,091,068	1,900,097	7,993,274	1,679,911	-
Shellfish et al.					
Clams:					
Hard.....	9,833	41,889	12,311	58,453	12,311
Ocean quahog.....	46,727	16,201	49,133	19,048	48,987
Soft.....	5,756	22,362	4,225	14,849	6,973
Surf.....	71,772	32,244	66,219	29,182	68,526
Other.....	5,110	17,498	2,355	3,734	3,244
Total.....	139,198	130,194	134,243	125,266	140,041
Crabs:					
Blue, hard.....	201,838	77,381	222,060	73,298	199,645
Dungeness.....	31,411	48,099	22,314	33,528	33,715
King.....	33,917	146,835	28,140	82,810	23,540
Snow (tanner).....	213,395	186,199	357,122	200,188	124,105
Other.....	18,855	25,323	20,357	25,011	17,729
Total.....	499,416	483,837	649,993	414,835	398,733
Lobsters:					
American.....	61,017	154,677	63,337	165,026	47,866
Spiny.....	7,120	23,249	7,096	32,134	6,626
Oysters.....	29,193	93,718	31,859	97,996	37,268
Scallops					
Bay.....	539	3,102	438	2,666	698
Calico.....	1,135	1,281	286	858	8,146
Sea.....	39,917	153,696	39,302	158,932	26,435
Shrimp:					
New England.....	9,668	6,912	7,423	6,760	9,078
South Atlantic.....	28,453	55,372	36,627	67,705	26,388
Gulf.....	249,461	398,609	228,883	410,664	255,653
Pacific.....	58,912	30,540	47,154	27,719	64,750
Other.....	-	-	-	-	-
Total.....	346,494	491,433	320,087	512,848	355,881
Squid:					
Atlantic.....	59,809	21,178	70,929	30,346	42,436
Pacific.....	36,082	2,636	68,640	5,288	49,728
Other shellfish.....	92,583	62,897	104,710	82,166	-
Total, shellfish et al.....	1,312,503	1,621,898	1,490,920	1,628,361	-
Grand total.....	9,403,571	3,521,995	9,484,194	3,308,272	-

(1) Landings are reported in round (live) weight for all items except univalve and bivalve mollusks such as clams, oysters, and scallops, which are reported in weight of meats (excluding the shell). Landings for Mississippi River Drainage area States are not available.

Note:--Data are preliminary. Data do not include landings by U.S.-flag vessels at Puerto Rico and other ports outside the 50 States, or catches by U.S.-flag vessels unloaded onto foreign vessels within the U.S. EEZ (joint ventures). Therefore, they will not agree with "U.S. Commercial Landings" table on page 6. Data do not include aquaculture products, except oysters and clams.

U.S. COMMERCIAL LANDINGS

3

DISPOSITION OF U.S. DOMESTIC LANDINGS, 1990 AND 1991

End Use	1990		1991	
	<u>Million pounds</u>	<u>Percent</u>	<u>Million pounds</u>	<u>Percent</u>
Fresh and frozen:				
For human food.....	6,272	66.7	6,299	66.4
For bait and animal food.....	229	2.4	242	2.6
Total.....	6,501	69.1	6,541	69.0
Canned:				
For human food.....	644	6.8	612	6.5
For bait and animal food.....	107	1.1	62	0.7
Total.....	751	8.0	674	7.1
Cured for human food....	126	1.3	119	1.3
Reduction to meal, oil, etc.....	2,026	21.5	2,150	22.7
Grand total.....	9,404	100.0	9,484	100.0

NOTE:--Data are preliminary. Table may not add due to rounding.

DISPOSITION OF U.S. DOMESTIC LANDINGS, BY MONTH, 1991

Month	Landings for Human food		Landings for Industrial purposes (1)		Total	
	<u>Million pounds</u>	<u>Percent</u>	<u>Million pounds</u>	<u>Percent</u>	<u>Million pounds</u>	<u>Percent</u>
January.....	675	9.6	70	2.9	745	7.9
February.....	740	78.0	79	3.2	819	8.6
March.....	547	78.0	29	1.2	576	6.1
April.....	429	6.1	72	2.9	501	5.3
May.....	439	6.2	191	7.8	630	6.6
June.....	803	11.4	378	15.4	1,181	12.5
July.....	1,139	16.2	488	19.9	1,627	17.2
August.....	1,127	16.0	437	17.8	1,564	16.5
September.....	504	7.2	304	12.4	808	8.5
October.....	295	4.2	202	8.2	497	5.2
November.....	188	2.7	108	4.4	296	3.1
December.....	145	2.1	95	3.9	240	2.5
Total.....	7,031	100.0	2,453	100.0	9,484	100.0

(1) Processed into meal, oil, solubles, and shell products, and used as bait and animal food.

U.S. COMMERCIAL LANDINGS OF FISH AND SHELLFISH, 1982-1991 (1)

Year	Landings for Human Food		Landings for Industrial Purposes (2)		Total	
	<u>Million pounds</u>	<u>Million dollars</u>	<u>Millions pounds</u>	<u>Million dollars</u>	<u>Millions pounds</u>	<u>Million dollars</u>
1982.....	3,285	2,247	3,082	143	6,367	2,390
1983.....	3,238	2,203	*3,201	152	6,439	2,355
1984.....	3,320	2,206	3,118	144	6,438	2,350
1985.....	3,294	2,198	2,964	128	6,258	2,326
1986.....	3,393	2,641	2,638	122	6,031	2,763
1987.....	3,946	2,979	2,950	136	6,896	3,115
1988.....	4,588	3,362	2,604	158	7,192	3,520
1989.....	6,204	3,111	2,259	127	8,463	3,238
1990.....	*7,041	3,366	2,363	156	9,404	3,522
1991.....	7,031	3,169	2,453	139	*9,484	3,308

(1) Statistics on landings are shown in round weight for all items except univalve and bivalve mollusks such as clams, oysters, and scallops, which are shown in weight of meats (excluding the shell). All data are preliminary. (2) Processed into meal, oil, solubles, and shell products, or used as bait or animal food. * Record.

NOTE:--Data do not include landings outside the 50 States or products of aquaculture, except oysters and clams.

U.S. COMMERCIAL LANDINGS

U.S. DOMESTIC LANDINGS, BY STATES, 1990 AND 1991 (1)

States	1990		1991		Record Landings	
	Thousand pounds	Thousand dollars	Thousand pounds	Thousand dollars	Year	Thousand pounds
Alabama.....	22,669	35,931	21,907	36,697	1973	39,749
Alaska.....	5,098,937	1,458,903	5,144,800	1,216,482	1991	5,144,800
California.....	347,139	126,928	348,238	139,560	1936	1,760,193
Connecticut.....	9,471	26,873	14,905	44,815	1930	88,012
Delaware.....	8,550	4,189	7,881	4,522	1953	367,500
Florida.....	179,940	170,494	162,731	162,056	1938	241,443
Georgia.....	13,191	19,761	15,987	23,719	1927	47,607
Hawaii.....	26,582	65,009	27,662	57,702	1984	34,824
Illinois.....	301	444	229	377	-	(2)
Indiana.....	353	505	658	1,024	-	(2)
Louisiana.....	1,061,228	263,467	1,192,539	243,600	1984	1,931,027
Maine.....	169,294	129,876	191,880	155,257	1950	356,266
Maryland.....	80,705	53,905	88,462	47,131	1890	141,607
Massachusetts.....	327,933	302,950	288,924	295,838	1948	649,696
Michigan.....	17,428	10,360	14,434	10,515	1930	35,580
Minnesota.....	505	136	309	111	-	(2)
Mississippi.....	319,585	42,379	238,388	34,297	1984	476,997
New Hampshire.....	10,704	10,028	10,675	13,267	-	(2)
New Jersey.....	149,369	89,344	175,841	96,865	1956	540,060
New York.....	48,823	56,474	50,823	53,161	1880	335,000
North Carolina.....	176,038	71,542	212,609	66,747	1981	432,006
Ohio.....	4,758	3,097	5,360	3,591	1936	31,083
Oregon.....	139,335	70,449	150,023	62,946	1989	170,052
Pennsylvania.....	291	279	315	323	-	(2)
Rhode Island.....	131,782	72,889	139,805	85,111	1991	139,805
South Carolina.....	14,516	24,012	19,138	28,534	1965	26,611
Texas.....	99,191	182,351	108,315	214,410	1960	237,684
Virginia.....	786,791	106,529	681,163	94,984	1990	789,791
Washington.....	137,186	118,138	152,290	109,548	1941	197,253
Wisconsin.....	20,976	4,753	17,903	5,082	-	(2)
Total.....	9,403,571	3,521,995	9,484,194	3,308,272	-	-

(1) Landings are reported in round (live) weight for all items except univalve and bivalve mollusks such as clams, oysters, and scallops, which are reported in weight of meats (excluding the shell). Landings for Mississippi River Drainage Area States are not available.

(2) Data Not available.

NOTE:--Data are preliminary. Data do not include landings by U.S.-flag vessels at Puerto Rico and other ports outside the 50 States, or catches by U.S.-flag vessels unloaded onto foreign vessels within the U.S. EEZ (joint venture). Therefore, they will not agree with "U.S. Commercial Landings" table on page 6. Data do not include aquaculture products, except oysters and clams.

U.S. DOMESTIC LANDINGS, BY REGIONS, 1990 AND 1991 (1)

Region	1990		1991	
	Thousand pounds	Thousand dollars	Thousand pounds	Thousand dollars
New England.....	649,184	542,616	646,189	594,288
Middle Atlantic.....	206,608	149,873	234,386	154,412
Chesapeake.....	867,496	160,434	769,625	142,115
South Atlantic.....	261,727	169,581	293,112	168,874
Gulf.....	1,624,631	640,356	1,678,502	641,186
Pacific Coast and Alaska.....	5,722,597	1,774,418	5,795,351	1,528,536
Great Lakes.....	44,746	19,708	39,367	21,159
Hawaii.....	26,582	65,009	27,662	57,702
Total.....	9,403,571	3,521,995	9,484,194	3,308,272

(1) Landings are reported in round (live) weight for all items except univalve and bivalve mollusks such as clams, oysters, and scallops, which are reported in weight of meats (excluding the shell). Landings for Mississippi River Drainage Area States are not available.

NOTE:--Data are preliminary. Data do not include landings by U.S.-flag vessels at Puerto Rico and other ports outside the 50 States, or catches by U.S.-flag vessels unloaded onto foreign vessels within the U.S. EEZ (joint venture). Therefore, they will not agree with "U.S. Commercial Landings" table on page 6. Data do not include aquaculture products, except oysters and clams.

U.S. COMMERCIAL LANDINGS

5

COMMERCIAL FISHERY LANDINGS AND VALUE AT MAJOR U.S. PORTS, 1989-91

Port	Quantity			Port	Value		
	1989	1990	1991		1989	1990	1991
<u>--Million pounds--</u>				<u>--Million dollars--</u>			
Dutch Harbor-Unalaska, AK..	504.3	509.9	731.7	New Bedford, MA.....	141.0	160.4	157.7
Empire-Venice, LA.....	272.7	244.2	308.6	Dutch Harbor-Unalaska, AK..	107.0	126.2	130.6
Cameron, LA.....	352.7	232.6	288.4	Kodiak, AK.....	100.2	101.7	96.9
Kodiak, AK.....	213.2	272.5	287.3	Brownsville-Port Isabel, TX	54.1	57.2	71.5
Pascagoula-Moss Point, MS..	282.1	303.9	227.3	Dulac-Chauvin, LA.....	50.0	52.7	48.8
Intercoastal City, LA.....	207.2	173.0	211.4	Portland, ME.....	34.4	31.7	44.1
Dulac-Chauvin, LA.....	210.9	164.4	166.3	Empire-Venice, LA.....	49.2	46.3	43.5
Beaufort-Morehead City, NC.	95.0	102.0	137.0	Aransas Pass-Rockport, TX..	32.0	34.9	41.6
Los Angeles, CA.....	217.2	158.5	115.7	Cape May-Wildwood, NJ.....	30.8	34.4	40.1
Morgan City-Berwick, LA....	68.1	146.5	112.3	Gloucester, MA.....	30.0	40.5	40.0
Gloucester, MA.....	98.5	126.2	107.2	Point Judith, RI.....	23.6	32.2	37.5
New Bedford, MA.....	90.4	114.8	106.4	Key West, FL.....	17.3	21.7	35.1
Cape May-Wildwood, NJ.....	54.0	69.2	93.1	Petersburg, AK.....	61.4	39.4	34.6
Petersburg, AK.....	113.5	67.5	90.3	Hampton Roads Area, VA....	31.1	43.4	32.4
Ketchikan, AK.....	91.6	52.6	68.5	Dillingham-Togiak, AK.....	(1)	24.0	29.2
Point Judith, RI.....	48.3	58.7	64.7	Naknek-South Naknek, AK....	(1)	91.1	28.8
Portland, ME.....	49.0	48.9	63.4	Golden Meadow-Leeville, LA.	33.5	26.5	28.5
Astoria, OR.....	51.0	41.2	53.0	Sitka, AK.....	24.2	22.1	26.2
Newport, OR.....	44.4	34.0	52.0	Bayou La Batre, AL.....	24.7	20.7	24.6
Dillingham-Togiak, AK.....	(1)	24.7	50.1	Seward, AK.....	23.1	29.1	24.5
Bellingham, WA.....	40.6	39.3	50.0	Beaufort-Morehead			
Cordova, AK.....	55.3	70.8	47.5	City, NC.....	25.0	23.0	23.0
Naknek-South Naknek, AK....	(1)	90.4	44.8	Ketchikan, AK.....	45.6	28.3	21.9
Seward, AK.....	34.2	51.2	44.6	Galveston, TX.....	15.1	13.0	21.2
Port Hueneme-Oxnard-				Bellingham, WA.....	21.3	23.0	21.0
Ventura, CA.....	65.3	39.4	44.0	Port Arthur, TX.....	23.8	21.1	20.6
Valdez, AK.....	(1)	46.1	40.4	Cameron, LA.....	20.5	20.6	20.3
Atlantic City, NJ.....	33.9	39.2	39.2	Cordova, AK.....	35.3	36.8	19.5
Rockland, ME.....	24.8	36.2	31.8	Homer, AK.....	18.2	(1)	19.5
Coos Bay-Charleston, OR....	34.9	31.8	30.0	Atlantic City, NJ.....	15.5	17.8	17.8
Crescent City, CA.....	39.4	31.1	29.8	Astoria, OR.....	20.0	16.2	17.0
Brownsville-Port Isabel, TX	22.7	25.2	29.6	San Francisco Area, CA.....	13.3	15.1	15.5
Homer, AK.....	20.3	(1)	28.2	Santa Barbara, CA.....	9.4	11.2	15.2
Sitka, AK.....	30.3	24.4	27.4	Pascagoula-Moss Point, MS..	16.9	18.8	15.1
San Francisco Area, CA.....	33.0	26.8	26.9	Los Angeles, CA.....	25.5	21.3	15.0
Hampton Roads Area, VA....	24.5	26.9	26.2	Montauk, NY.....	8.5	15.4	15.0
Seattle, WA.....	15.6	16.5	26.0	Seattle, WA.....	14.7	13.5	15.0
Ocean City, MD.....	24.6	21.1	25.4	Valdez, AK.....	(1)	20.5	14.9
Provincetown-Chatham, MA...	23.7	30.3	24.4	Delcambre, LA.....	15.7	14.7	14.7
Golden Meadow-Leeville, LA.	24.5	20.9	23.4	Provincetown-Chatham, MA...	12.9	14.7	14.3
Wanchese-Stumpy Point, NC..	25.0	23.0	23.0	Newport, OR.....	19.2	14.7	14.0
Kenai, AK.....	35.0	41.9	21.5	Kenai, AK.....	56.0	47.9	13.2
Aransas Pass-Rockport, TX..	15.0	18.0	21.2	Port Hueneme-Oxnard-			
Point Pleasant, NJ.....	19.2	18.4	20.8	Ventura, CA.....	12.0	12.5	13.2
Westport, WA.....	30.2	26.2	20.0	Coos Bay-Charleston, OR....	16.1	14.5	13.0
Eureka, CA.....	21.2	24.4	19.3	Boston, MA.....	12.8	14.1	13.0
Monterey, CA.....	17.3	22.8	19.2	Freeport, TX.....	10.7	14.8	12.6
Anacortes-La				Westport, WA.....	17.1	17.9	12.0
Conner, WA.....	15.8	15.5	18.0	Point Pleasant, NJ.....	8.4	9.6	12.0
Boston, MA.....	17.3	19.6	15.2	Apalachicola, FL.....	7.8	7.5	11.6
Englehard-Swanquarter, NC..	(1)	(1)	15.0	Lafitte-Barataria, LA.....	10.6	11.1	11.5
Bayou La Batre, AL.....	14.9	13.7	14.9	Fort Myers, FL.....	13.1	10.9	11.5
Fort Bragg, CA.....	25.7	17.5	14.7	Bon Secour-Gulf Shores, AL.	9.7	11.1	11.4
Montauk, NY.....	9.6	14.2	14.2	Grand Isle, LA.....	10.7	14.3	11.3
Key West, FL.....	9.6	11.4	14.1	Crescent City, CA.....	15.0	16.8	11.0
Bodega Bay, CA.....	11.2	12.6	13.2	Wanchese-Stumpy Point, NC..	16.0	15.0	11.0
Craig, AK.....	(1)	9.0	12.6	Ocean City, MD.....	9.1	8.8	10.7
Ilwaco-Chinook, WA.....	23.3	13.2	12.0	Cape Canaveral, FL.....	15.8	13.2	9.9
Wrangell, AK.....	9.3	15.6	11.9	Bodega Bay, CA.....	8.4	8.4	9.1
Galveston, TX.....	8.7	8.0	11.8	Anacortes-La Conner, WA....	13.5	10.4	9.0
Santa Barbara, CA.....	9.9	11.6	11.5	Darien-Bellville, GA.....	4.0	9.0	9.0
Grand Isle, LA.....	10.8	14.2	10.4	Shelton, WA.....	8.0	7.2	9.0

(1) Not available. Record quantity was 848.2 million lb landed in Los Angeles, California in 1960. Record value was \$166.3 million at Kodiak, AK in 1988.

NOTE:--To avoid disclosure of private enterprise certain leading ports have not been included.

U.S. COMMERCIAL LANDINGS

COMMERCIAL LANDINGS OF FISH AND SHELLFISH BY U.S. FISHING CRAFT: BY SPECIES, BY DISTANCE CAUGHT
OFF U.S. SHORES AND IN INTERNATIONAL WATERS, 1991 (1)

Species	Distance caught off U.S. Shores				International Waters (Includes catch off foreign coasts)		Total	
	0 to 3 Miles	3 to 200 Miles	Thousand pounds	Thousand dollars	Thousand pounds	Thousand dollars	Thousand pounds	Thousand dollars
Fish								
Alewives:								
Atlantic and Gulf.	3,627	300	1	(3)	-	-	3,628	300
Great Lakes. . . .	10,528	83	-	-	-	-	10,528	83
Anchovies.	19,054	6,745	191	68	-	-	19,245	6,813
Bluefish.	7,757	1,555	5,475	1,176	-	-	13,232	2,731
Bonito.	538	143	926	254	-	-	1,464	397
Butterfish.	689	326	5,492	2,845	-	-	6,181	3,171
Cod:								
Atlantic.	1,142	926	91,492	73,166	2	1	92,636	74,093
Pacific.	38,979	9,490	514,737	112,660	-	-	553,716	122,150
Croaker.	4,620	2,090	141	56	-	-	4,761	2,146
Cusk.	13	7	3,287	1,669	-	-	3,300	1,676
Flounders:								
Atlantic and Gulf:								
Blackback.	1,215	1,133	15,204	17,462	5	5	16,424	18,600
Fluke.	6,901	9,196	11,289	15,303	(3)	1	18,190	24,500
Yellowtail.	196	179	16,926	17,575	10	10	17,132	17,764
Other.	1,425	1,585	21,841	19,945	9	5	23,275	21,535
Pacific.	12,040	3,810	317,894	58,580	-	-	329,934	62,390
Total.	21,777	15,903	383,154	120,865	24	21	404,955	144,789
Groupers.	149	281	10,589	19,543	-	-	10,738	19,824
Haddock.	9	11	4,044	4,570	-	-	4,053	4,581
Hake:								
Pacific (whiting).	15,982	1,689	39,982	2,003	-	-	55,964	3,692
Red.	118	31	3,578	792	-	-	3,696	823
White.	19	7	12,721	5,564	-	-	12,740	5,571
Halibut.	17,693	26,145	48,646	73,387	-	-	66,339	99,532
Herring, sea:								
Atlantic.	64,307	3,093	69,917	3,813	-	-	134,224	6,906
Pacific.	123,141	30,832	-	-	-	-	123,141	30,832
Jack mackerel.	3,582	233	36	2	-	-	3,618	235
Lingcod.	1,277	465	6,998	2,408	-	-	8,275	2,873
Mackerel:								
Atlantic.	568	128	36,132	5,348	-	-	36,700	5,476
King.	350	402	3,931	4,717	-	-	4,281	5,119
Pacific.	60,171	4,629	3,165	243	-	-	63,336	4,872
Spanish.	2,047	824	5,429	2,882	-	-	7,476	3,706

See footnotes at end of table.

(Continued)

U.S. COMMERCIAL LANDINGS

7

COMMERCIAL LANDINGS OF FISH AND SHELLFISH BY U.S. FISHING CRAFT: BY SPECIES, BY DISTANCE CAUGHT OFF U.S. SHORES AND IN INTERNATIONAL WATERS, 1991 (1) - Continued

Species	Distance caught off U.S. Shores			International Waters (Includes catch off foreign coasts)		Total	
	0 to 3 Miles	(2)	3 to 200 Miles	Thousand pounds	Thousand dollars	Thousand pounds	Thousand dollars
Fish - Continued:	Thousand pounds	Thousand dollars	Thousand pounds	Thousand dollars	Thousand dollars	Thousand pounds	Thousand dollars
Menhaden							
Atlantic	876,217	38,334	181	8	-	876,398	38,342
Gulf	862,308	30,718	351,817	10,590	-	1,214,125	41,308
Total	1,738,525	69,052	351,998	10,598	-	2,090,523	79,650
Mullet	28,708	10,568	9	1	-	28,717	10,569
Ocean perch:							
Atlantic	1	(3)	1,175	543	-	1,176	543
Pacific	25	2	29,969	6,443	-	29,994	6,445
Pollock:							
Atlantic	58	30	17,286	9,871	-	17,344	9,901
Alaska	39,365	3,372	2,815,951	238,179	-	2,855,316	241,551
Rockfishes	4,969	1,957	92,497	31,735	-	97,466	33,692
Sablefish	6,614	8,050	76,996	70,116	-	83,610	78,166
Salmon:							
Chinook or king . .	15,818	27,565	4,325	9,418	-	20,143	36,983
Chum or keta . . .	76,155	24,875	27	9	-	76,182	24,884
Pink	362,728	47,041	88	14	-	362,816	47,055
Red or sockeye . .	268,791	210,992	2	3	-	268,793	210,995
Silver or coho . . .	51,649	36,273	3,702	3,530	-	55,351	39,803
Total	775,141	346,746	8,144	12,974	0	783,285	359,720
Scup or porgy . . .	4,148	2,271	11,996	6,856	1	16,145	9,127
Sea bass:							
Black	296	435	3,614	4,173	-	3,910	4,608
White	130	272	33	68	-	163	340
Sea trout:							
Gray	6,690	3,767	1,978	1,087	-	8,668	4,854
Spotted	2,885	3,492	1	1	-	2,886	3,493
White	162	94	57	28	-	219	122
Sharks:							
Dogfish	7,917	982	26,459	2,462	-	34,376	3,444
Other	2,140	1,228	10,410	5,879	81	12,631	7,154
Snapper:							
Red	-	-	2,358	5,681	-	2,358	5,681
Other	883	2,622	6,441	11,512	-	7,324	14,134
Striped bass	717	1,126	9	12	-	726	1,138
Swordfish	-	-	14,178	41,771	3,785	17,963	50,155
Tilefish	-	-	4,090	6,193	-	4,090	6,193

See footnotes at end of table.

(Continued)

U.S. COMMERCIAL LANDINGS

**COMMERCIAL LANDINGS OF FISH AND SHELLFISH BY U.S. FISHING CRAFT: BY SPECIES, BY DISTANCE CAUGHT
OFF U.S. SHORES AND IN INTERNATIONAL WATERS, 1991 (1) - Continued**

Species	Distance caught off U.S. Shores			International Waters (Includes catch off foreign coasts)		Total	
	0 to 3 Miles Thousand pounds	3 to 200 Miles Thousand pounds	Thousand dollars	Thousand pounds	Thousand dollars	Thousand pounds	Thousand dollars
Fish - Continued:							
Tuna:							
Albacore	16	2,289	1,891	12,223	9,508	14,528	11,406
Bigeye	-	4,173	15,881	1,058	3,910	5,231	19,791
Bluefin	1	1,813	16,940	51	57	1,865	16,998
Skipjack	278	2,562	2,753	388,696	152,310	391,536	155,381
Yellowfin	176	10,489	22,937	94,894	46,059	105,559	69,477
Unclassified	203	773	521	168	86	1,144	649
Total	674	22,099	60,923	497,090	211,930	519,863	273,702
Whiting	1,199	35,334	10,747	-	-	36,533	11,219
Other marine finfishes	102,982	207,726	55,702	2,294	3,088	313,002	94,315
Other freshwater finfishes	28,498	-	-	-	-	28,498	20,901
Total fish.	3,150,864	4,990,872	1,039,586	503,277	223,471	8,645,013	1,883,208
Shellfish, et al:							
Clams:							
Hard	12,311	-	-	-	-	12,311	58,453
Ocean quahog	89	49,044	18,746	-	-	49,133	19,048
Soft	4,225	-	-	-	-	4,225	14,849
Surf	20,721	45,498	21,584	-	-	66,219	29,182
Other	1,514	841	684	-	-	2,355	3,734
Total	38,860	95,383	41,014	-	-	134,243	125,266
Crabs:							
Blue, hard	222,043	17	8	-	-	222,060	73,298
Dungeness	18,482	3,832	5,992	-	-	22,314	33,528
King	1,498	26,642	78,236	-	-	28,140	82,810
Snow (tanner)	5,096	352,026	193,049	-	-	357,122	200,188
Other	8,293	12,064	14,641	-	-	20,357	25,011
Total	255,412	391,581	291,926	-	-	649,993	414,835
Lobsters:							
American	52,854	10,483	31,681	-	-	63,337	165,026
Spiny	2,659	4,437	19,666	-	-	7,096	32,134
Oysters	31,859	-	-	-	-	31,859	97,996

See footnotes at end of table.

(Continued)

U.S. COMMERCIAL LANDINGS

COMMERCIAL LANDINGS OF FISH AND SHELLFISH BY U.S. FISHING CRAFT: BY SPECIES, BY DISTANCE CAUGHT OFF U.S. SHORES AND IN INTERNATIONAL WATERS, 1991 (1) - Continued

Species	Distance caught off U.S. Shores		International Waters (Includes catch off foreign coasts)		Total	
	0 to 3 Miles	(2)	3 to 200 Miles			
Shellfish - Continued:	Thousand pounds	Thousand dollars	Thousand pounds	Thousand dollars	Thousand pounds	Thousand dollars
Scallops:						
Bay.	438	2,666	-	-	438	2,666
Calico	-	-	286	858	286	858
Sea.	1,385	6,209	37,917	152,723	39,302	158,932
Shrimp:						
New England.	1,303	1,269	6,120	5,491	7,423	6,760
South Atlantic	32,640	61,755	3,987	5,950	36,627	67,705
Gulf	109,128	140,308	119,755	270,356	228,883	410,664
Pacific Coast.	5,463	2,543	41,691	25,176	47,154	27,719
Total	148,534	205,875	171,553	306,973	320,087	512,848
Squid:						
Atlantic	7,166	3,828	63,710	26,493	70,929	30,346
Pacific.	68,169	5,279	471	9	68,640	5,288
Other shellfish.	98,817	79,518	11,237	13,443	110,054	92,961
Total shellfish et al.	706,153	754,345	790,058	884,786	1,496,264	1,639,156
Grand total, 1991	3,857,017	1,374,496	5,780,930	1,924,372	10,141,277	3,522,364
Grand total, 1990 (4)	4,467,804	1,831,615	5,761,295	1,745,861	10,715,854	3,810,306

(1) Landings are reported in round (live) weight for all items, except univalve mollusks, such as clams, oysters, and scallops, which are reported in weight of meats (excluding the shell). The National Marine Fisheries Service estimated the distance from shore for Texas landings data collected by Texas Parks and Wildlife Department.

(2) Includes landings from the Great Lakes and other inland waters, but excludes Mississippi River Drainage Area States.

(3) Less than 500 lb or \$500.

(4) For individual species breakout see "Fisheries of the United States, 1990" pages 6-9.

NOTE:--Data are preliminary. Data include landings by U.S.-flag vessels at Puerto Rico and other ports outside the 50 States, and catches by U.S.-flag vessels unloaded onto foreign vessels within the U.S. EEZ (joint ventures). Therefore, they will not agree with "U.S. Commercial Landings" tables beginning on page 1. Data do not include aquaculture products, except oysters and clams.

U.S. COMMERCIAL LANDINGS

COMMERCIAL LANDINGS OF FISH AND SHELLFISH BY U.S. FISHING CRAFT: BY SPECIES, BY DISTANCE CAUGHT
OFF U.S. SHORES AND IN INTERNATIONAL WATERS, 1991 (1)

Species	Distance caught off U.S. Shores			International Waters (Includes catch off foreign coasts)			Total	
	0 to 3 Miles	(2)	3 to 200 Miles	Metric tons	Thousand dollars	Metric tons	Thousand dollars	
Fish								
Alewives:								
Atlantic and Gulf.	1,645	300	(3)	(3)		1,645	300	
Great Lakes. . . .	4,775	83	-	-		4,775	83	
Anchovies.	8,643	6,745	87	68		8,729	6,813	
Bluefish.	3,519	1,555	2,483	1,176		6,002	2,731	
Bonito.	244	143	420	254		664	397	
Butterfish.	313	326	2,491	2,845		2,804	3,171	
Cod:								
Atlantic.	518	926	41,500	73,166	1	42,019	74,093	
Pacific.	17,681	9,490	233,483	112,660	-	251,164	122,150	
Croaker.	2,096	2,090	64	56	-	2,160	2,146	
Cusk.	6	7	1,491	1,669	-	1,497	1,676	
Flounders:								
Atlantic and Gulf:								
Blackback.	551	1,133	6,896	17,462	2	7,450	18,600	
Fluke.	3,130	9,196	5,121	15,303	(3)	8,251	24,500	
Yellowtail.	89	179	7,678	17,575	5	7,771	17,764	
Other.	646	1,585	9,907	19,945	4	10,557	21,535	
Pacific.	5,461	3,810	144,196	58,580	-	149,657	62,390	
Total.	9,878	15,903	173,798	128,865	11	183,685	144,789	
Groupers.	68	281	4,803	19,543	-	4,871	19,824	
Haddock.	4	11	1,834	4,570	-	1,838	4,581	
Hake:								
Pacific (whiting).	7,249	1,689	18,136	2,003	-	25,385	3,692	
Red.	54	31	1,623	792	-	1,676	823	
White.	9	7	5,770	5,564	-	5,779	5,571	
Halibut.	8,025	26,145	22,066	73,387	-	30,091	99,532	
Herring, sea:								
Atlantic.	29,169	3,093	31,714	3,813	-	60,884	6,906	
Pacific.	55,856	30,832	-	-	-	55,856	30,832	
Jack mackerel.	1,625	233	16	2	-	1,641	235	
Lingcod.	579	465	3,174	2,408	-	3,754	2,873	
Mackerel:								
Atlantic.	258	128	16,389	5,348	-	16,647	5,476	
King.	159	402	1,783	4,717	-	1,942	5,119	
Pacific.	27,293	4,629	1,436	243	-	28,729	4,872	
Spanish.	929	824	2,463	2,882	-	3,391	3,706	

See footnotes at end of table.

(Continued)

COMMERCIAL LANDINGS OF FISH AND SHELLFISH BY U.S. FISHING CRAFT: BY SPECIES, BY DISTANCE CAUGHT
OFF U.S. SHORES AND IN INTERNATIONAL WATERS, 1991 (1) - Continued

Species	Distance caught off U.S. Shores ----- 0 to 3 Miles (2) -----			----- 3 to 200 Miles -----			International Waters (Includes catch off foreign coasts)		Total	
	Metric tons	Thousand dollars		Metric tons	Thousand dollars		Metric tons	Thousand dollars	Metric tons	Thousand dollars
Menhaden										
Atlantic	397,449	38,334		82	8		-	-	397,532	38,342
Gulf	391,140	30,718		159,583	10,590		-	-	550,723	41,308
Total	788,590	69,052		159,665	10,598		-	-	948,255	79,650
Mullet	13,022	10,568		4	1		-	-	13,026	10,569
Ocean perch:										
Atlantic	(3)	(3)		533	543		-	-	533	543
Pacific	11	2		13,594	6,443		-	-	13,605	6,445
Pollock:										
Atlantic	26	30		7,841	9,871		-	-	7,867	9,901
Alaska	17,856	3,372		1,277,307	238,179		-	-	1,295,163	241,551
Rockfishes	2,254	1,957		41,956	31,735		-	-	44,210	33,692
Sablefish	3,000	8,050		34,925	70,116		-	-	37,925	78,166
Salmon:										
Chinook or king. . .	7,175	27,565		1,962	9,418		-	-	9,137	36,983
Chum or keta . . .	34,544	24,875		(3)	9		-	-	34,544	24,884
Pink	164,532	47,041		(3)	14		-	-	164,532	47,055
Red or sockeye . .	121,923	210,992		(3)	3		-	-	121,923	210,995
Silver or coho . .	23,428	36,273		1,679	3,530		-	-	25,107	39,803
Total	351,602	346,746		3,694	12,974		-	-	355,296	359,720
Scup or porgy. . .	1,882	2,271		5,441	6,856		(3)	(3)	7,323	9,127
Sea bass:										
Black	134	435		1,639	4,173		-	-	1,774	4,608
White	59	272		15	68		-	-	74	340
Sea trout:										
Gray	3,035	3,767		897	1,087		-	-	3,932	4,854
Spotted	1,309	3,492		(3)	1		-	-	1,309	3,493
White	73	94		26	28		-	-	99	122
Sharks:										
Dogfish	3,591	982		12,002	2,462		-	-	15,593	3,444
Other	971	1,228		4,722	5,879		37	47	5,729	7,154
Snapper:										
Red	-	-		1,070	5,681		-	-	1,070	5,681
Other	401	2,622		2,922	11,512		-	-	3,322	14,134
Striped bass . . .	325	1,126		4	12		-	-	329	1,138
Swordfish	-	-		6,431	41,771		1,717	8,384	8,148	50,155
Tilefish	-	-		1,855	6,193		-	-	1,855	6,193

See footnotes at end of table.

(Continued)

U.S. COMMERCIAL LANDINGS

**COMMERCIAL LANDINGS OF FISH AND SHELLFISH BY U.S. FISHING CRAFT: BY SPECIES, BY DISTANCE CAUGHT
OFF U.S. SHORES AND IN INTERNATIONAL WATERS, 1991 (1) - Continued**

Species	Distance caught off U.S. Shores			International Waters (Includes catch off foreign coasts)			Total
	0 to 3 Miles	3 to 200 Miles	200 Miles and beyond	0 to 3 Miles	3 to 200 Miles	200 Miles and beyond	
Fish - Continued:							
Tuna:							
Albacore	7	1,038	1,891	5,544	9,508	6,590	11,406
Bigeye	-	1,893	15,881	480	3,910	2,373	19,791
Bluefin	(3)	822	16,940	23	57	846	16,998
Skipjack	126	318	2,753	176,311	152,310	177,600	155,381
Yellowfin	80	481	22,937	43,044	46,059	47,881	69,477
Unclassified	92	42	521	76	86	519	649
Total	306	849	60,923	225,479	211,930	235,808	273,702
Whiting	544	472	10,747	-	-	16,571	11,219
Other marine finfishes	46,712	35,525	55,702	1,041	3,088	141,977	94,315
Other freshwater finfishes	12,927	20,901	-	-	-	12,927	20,901
Total fish	1,429,223	620,151	1,039,586	228,285	223,471	3,921,352	1,883,208
Shellfish, et al:							
Clams:							
Hard	5,584	58,453	-	-	-	5,584	58,453
Ocean quahog	40	302	-	-	-	40	302
Soft	1,916	14,849	-	-	-	1,916	14,849
Surf	9,399	7,598	21,584	-	-	30,037	29,182
Other	687	3,050	684	-	-	1,068	3,734
Total	17,627	84,252	41,014	-	-	60,892	125,266
Crabs:							
Blue, hard	100,718	73,290	8	-	-	100,726	73,298
Dungeness	8,383	27,536	5,992	-	-	10,122	33,528
King	679	4,574	78,236	-	-	12,764	82,810
Snow (tanner)	2,312	7,139	193,049	-	-	161,989	200,188
Other	3,762	10,370	14,641	-	-	9,234	25,011
Total	115,854	122,909	291,926	-	-	294,835	414,835
Lobsters:							
American	23,974	133,345	31,681	-	-	28,729	165,026
Spiny	1,206	12,468	19,666	-	-	3,219	32,134
Oysters	14,451	97,996	-	-	-	14,451	97,996

See footnotes at end of table.

(Continued)

U.S. COMMERCIAL LANDINGS

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COMMERCIAL LANDINGS OF FISH AND SHELLFISH BY U.S. FISHING CRAFT: BY SPECIES, BY DISTANCE CAUGHT OFF U.S. SHORES AND IN INTERNATIONAL WATERS, 1991 (1) - Continued

Species	Distance caught off U.S. Shores		International Waters (Includes catch off foreign coasts)		Total	
	0 to 3 Miles Metric tons	3 to 200 Miles Thousand dollars	Metric tons	Thousand dollars	Metric tons	Thousand dollars
Shellfish - Continued:						
Scallops:						
Bay.	199	2,666	-	-	199	2,666
Calico	-	-	130	858	130	858
Sea.	628	6,209	-	-	17,827	158,932
Shrimp:						
New England.	591	1,269	-	-	3,367	6,760
South Atlantic	14,805	61,755	-	-	16,614	67,705
Gulf	49,500	140,308	-	-	103,821	410,664
Pacific Coast.	2,478	2,543	-	-	21,389	27,719
Total	67,375	205,875	77,816	306,973	145,191	512,848
Squid:						
Atlantic	3,250	3,828	-	-	32,149	30,321
Pacific.	30,921	5,279	214	9	31,135	5,288
Other shellfish.	44,823	79,518	5,097	13,443	49,920	92,961
Total shellfish et al.	320,309	754,345	358,368	884,786	678,677	1,639,131
Grand total, 1991	1,749,531	1,374,496	2,622,213	1,924,372	4,600,053	3,522,364
Grand total, 1990 (4)	2,026,583	1,831,615	2,613,306	1,745,861	4,860,679	3,810,306

(1) Landings are reported in round (live) weight for all items, except univalve mollusks, such as clams, oysters, and scallops, which are reported in weight of meats (excluding the shell). The National Marine Fisheries Service estimated the distance from shore for Texas landings data collected by Texas Parks and Wildlife Department.

(2) Includes landings from the Great Lakes and other inland waters, but excludes Mississippi River Drainage Area States.

(3) Less than 1 metric ton or \$500.

(4) For individual species breakout see "Fisheries of the United States, 1990" pages 6-9.

NOTE:--Data are preliminary. Data include landings by U.S.-flag vessels at Puerto Rico and other ports outside the 50 States, and catches by U.S.-flag vessels unloaded onto foreign vessels within the U.S. EEZ (joint ventures). Therefore, they will not agree with "U.S. Commercial Landings" tables beginning on page 1. Data do not include aquaculture products, except oysters and clams.

U.S. COMMERCIAL LANDINGS

HISTORICAL FISHERY STATISTICS

TOTAL ATLANTIC AND GULF CATCH, BY REGIONS, BAY SCALLOPS, 1950-91 (1)

YEAR	NEW ENGLAND		MIDDLE ATLANTIC		SOUTH ATLANTIC	
	<u>Thousand pounds</u>	<u>Thousand dollars</u>	<u>Thousand pounds</u>	<u>Thousand dollars</u>	<u>Thousand pounds</u>	<u>Thousand dollars</u>
1950	1,376	1,130	27	32	72	39
1951	1,253	959	101	121	183	96
1952	1,188	913	182	255	254	126
1953	2,397	1,222	162	102	65	33
1954	987	688	127	110	52	26
1955	1,070	837	226	210	78	39
1956	433	433	464	426	125	63
1957	1,230	880	674	447	109	37
1958	1,013	680	688	413	169	58
1959	591	700	385	386	128	51
1960	1,063	759	843	674	69	27
1961	704	671	862	621	106	42
1962	1,425	1,081	1,353	851	168	67
1963	391	492	577	404	321	122
1964	466	595	1,063	886	340	173
1965	459	562	982	766	379	196
1966	880	1,076	492	408	399	184
1967	455	579	248	258	387	211
1968	491	776	218	374	639	422
1969	1,172	1,592	249	377	613	383
1970	1,101	1,704	365	470	130	91
1971	2,063	3,531	144	234	60	42
1972	1,776	3,407	93	215	128	110
1973	694	1,462	230	467	37	33
1974	567	1,014	694	872	220	199
1975	1,054	2,568	444	713	135	105
1976	890	1,973	438	816	248	194
1977	1,044	3,085	199	489	257	509
1978	1,521	4,982	280	837	221	393
1979	1,382	5,967	346	1,243	193	514
1980	1,356	6,671	431	1,840	328	1,107
1981	964	4,630	244	891	189	656
1982	2,022	8,949	500	1,809	137	352
1983	1,083	6,491	167	992	205	509
1984	808	4,573	279	1,264	384	876
1985	958	5,812	174	828	456	1,072
1986	509	3,797	13	65	306	838
1987	341	2,813	(2)	3	155	501
1988	530	3,339	(2)	2	39	73
1989	215	1,494	2	22	84	214
1990	450	2,812	11	132	78	158
1991	375	2,438	15	117	45	100

(Continued)

U.S. COMMERCIAL LANDINGS

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HISTORICAL FISHERY STATISTICS

TOTAL ATLANTIC AND GULF CATCH, BY REGIONS, BAY SCALLOPS, 1950-91 (1)

YEAR	GULF		GRAND TOTAL	
	<u>Thousand pounds</u>	<u>Thousand dollars</u>	<u>Thousand pounds</u>	<u>Thousand dollars</u>
1950	125	63	1,600	1,264
1951	252	161	1,789	1,337
1952	210	48	1,834	1,342
1953	229	53	2,853	1,410
1954	43	10	1,209	834
1955	223	53	1,597	1,139
1956	278	70	1,300	992
1957	315	91	2,328	1,455
1958	401	75	2,271	1,226
1959	82	19	1,186	1,156
1960	56	14	2,031	1,474
1961	36	14	1,708	1,348
1962	213	68	3,159	2,067
1963	228	59	1,517	1,077
1964	18	14	1,887	1,668
1965	39	24	1,859	1,548
1966	9	4	1,780	1,672
1967	7	5	1,097	1,053
1968	143	122	1,491	1,694
1969	80	61	2,114	2,413
1970	104	56	1,700	2,321
1971	48	39	2,315	3,846
1972	35	40	2,032	3,772
1973	53	63	1,014	2,025
1974	16	18	1,497	2,103
1975	14	16	1,647	3,402
1976	14	24	1,590	3,007
1977	46	58	1,546	4,141
1978	49	91	2,071	6,303
1979	62	137	1,983	7,861
1980	11	29	2,126	9,647
1981	22	62	1,419	6,239
1982	13	35	2,672	11,145
1983	22	75	1,477	8,067
1984	10	26	1,481	6,739
1985	4	10	1,592	7,722
1986	8	13	836	4,713
1987	3	10	499	3,327
1988	17	56	586	3,470
1989	11	43	312	1,773
1990	-	-	539	3,102
1991	3	11	438	2,666

(1) Data for 1978 through 1991 are preliminary.

(2) Less than 500 lb.

U.S. COMMERCIAL LANDINGS

HISTORICAL FISHERY STATISTICS

TOTAL ATLANTIC CATCH, BY REGION, SEA SCALLOPS, 1950-91 (1)

YEAR	NEW ENGLAND		MIDDLE ATLANTIC		CHESAPEAKE	
	<u>Thousand pounds</u>	<u>Thousand dollars</u>	<u>Thousand pounds</u>	<u>Thousand dollars</u>	<u>Thousand pounds</u>	<u>Thousand dollars</u>
1950	13,753	6,384	6,135	2,781	92	39
1951	14,444	6,471	4,259	1,825	43	28
1952	15,392	9,093	3,205	1,721	33	18
1953	19,987	8,864	3,590	1,595	41	17
1954	15,594	7,028	2,037	948	-	-
1955	16,881	8,821	5,244	2,610	33	18
1956	16,884	9,109	3,164	1,700	21	13
1957	18,781	9,119	2,167	1,040	46	21
1958	16,410	7,941	2,324	1,097	243	102
1959	20,259	9,825	3,949	1,814	436	166
1960	22,462	7,823	3,356	1,153	781	290
1961	23,775	9,035	3,368	1,238	318	131
1962	21,724	8,857	2,815	1,134	95	33
1963	17,794	8,257	2,099	978	46	22
1964	14,536	7,955	2,184	1,194	194	95
1965	12,335	8,350	4,813	3,051	2,830	1,725
1966	11,147	5,520	2,528	1,186	2,300	919
1967	7,025	5,438	1,585	1,174	1,632	1,154
1968	7,938	8,850	1,978	2,194	2,112	2,268
1969	5,107	5,636	912	982	1,378	1,474
1970	4,467	6,028	635	835	750	995
1971	4,346	6,418	514	771	546	802
1972	4,422	8,628	468	933	960	1,856
1973	3,949	7,072	569	1,067	773	1,347
1974	4,611	7,174	534	817	872	1,276
1975	7,081	13,382	981	1,780	1,270	2,330
1976	11,970	22,247	3,633	6,029	2,878	4,865
1977	17,951	29,721	3,596	5,747	3,627	5,529
1978	17,688	44,876	5,040	12,185	7,456	18,029
1979	16,202	55,037	5,772	18,717	7,676	24,376
1980	17,018	65,571	4,143	16,274	6,140	23,776
1981	19,910	80,212	2,570	10,709	3,350	14,467
1982	15,822	58,995	1,920	7,224	2,194	8,370
1983	13,574	76,385	2,719	15,436	2,915	16,296
1984	11,124	62,652	2,573	13,813	3,324	17,747
1985	10,223	50,078	1,849	8,532	2,873	13,380
1986	11,707	61,669	2,317	10,388	4,264	18,914
1987	18,280	81,038	3,558	13,979	7,352	28,345
1988	18,388	81,234	3,431	14,214	6,631	26,468
1989	20,576	84,034	4,024	15,000	7,719	28,470
1990	24,661	99,057	4,664	16,432	8,785	32,147
1991	24,031	101,932	4,845	18,119	8,859	32,932

(Continued)

U.S. COMMERCIAL LANDINGS

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HISTORICAL FISHERY STATISTICS

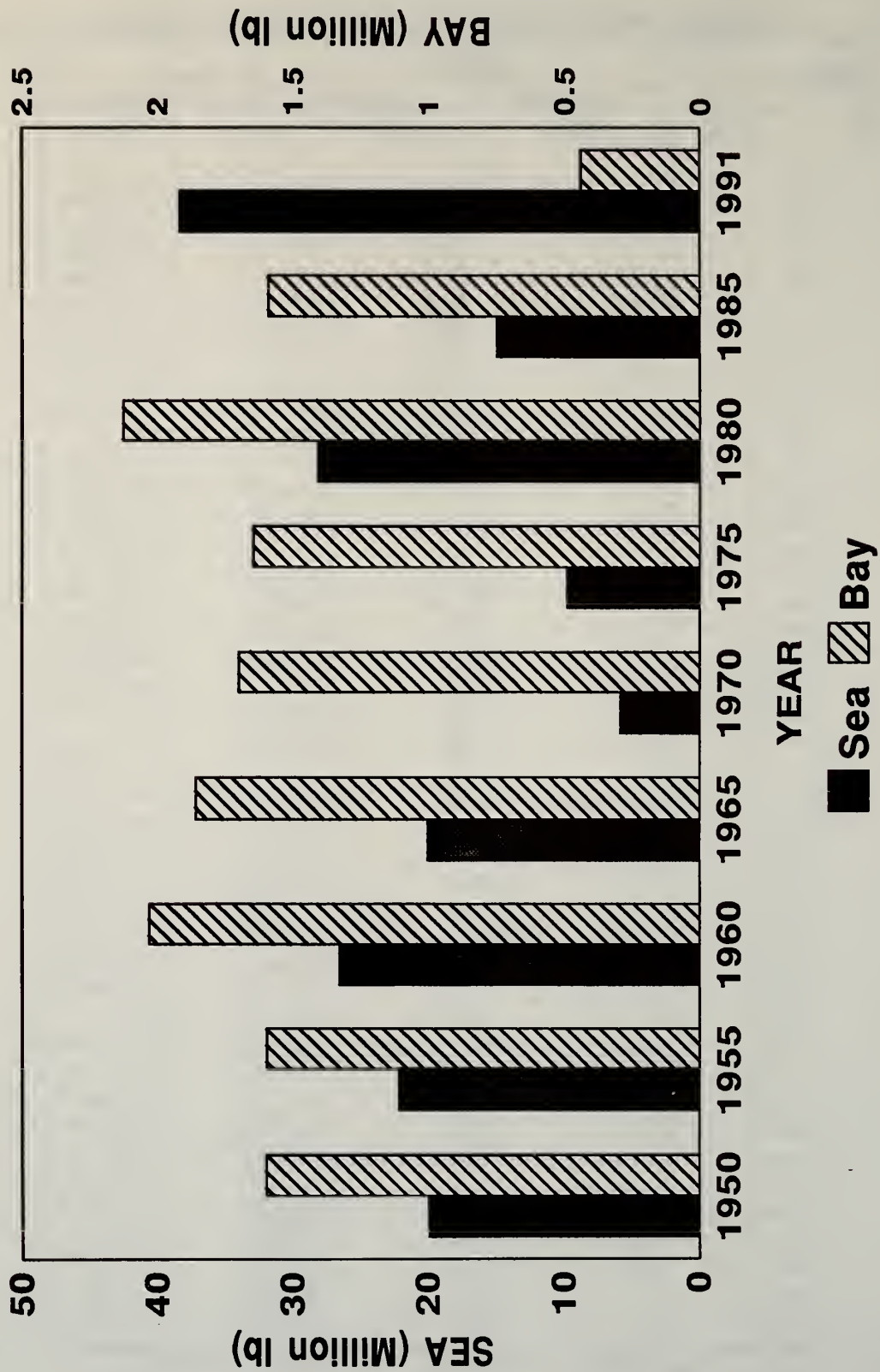
TOTAL ATLANTIC CATCH, BY REGION, SEA SCALLOPS, 1950-91 (1)

YEAR	SOUTH ATLANTIC		GRAND TOTAL	
	<u>Thousand pounds</u>	<u>Thousand dollars</u>	<u>Thousand pounds</u>	<u>Thousand dollars</u>
1950	-	-	19,980	9,204
1951	-	-	18,746	8,324
1952	-	-	18,630	10,832
1953	-	-	23,618	10,476
1954	-	-	17,631	7,976
1955	-	-	22,158	11,449
1956	-	-	20,069	10,822
1957	-	-	20,994	10,180
1958	-	-	18,977	9,140
1959	-	-	24,644	11,805
1960	-	-	26,599	9,266
1961	-	-	27,461	10,404
1962	-	-	24,634	10,024
1963	-	-	19,939	9,257
1964	-	-	16,914	9,244
1965	92	56	20,070	13,182
1966	-	-	15,975	7,625
1967	-	-	10,242	7,766
1968	42	42	12,070	13,354
1969	13	13	7,410	8,105
1970	-	-	5,852	7,858
1971	-	-	5,406	7,991
1972	-	-	5,850	11,417
1973	-	-	5,291	9,486
1974	-	-	6,017	9,267
1975	421	421	9,753	17,913
1976	1,107	1,432	19,588	34,573
1977	657	954	25,831	41,951
1978	984	1,828	31,168	76,918
1979	-	-	29,650	98,130
1980	861	2,979	28,162	108,600
1981	125	478	25,955	105,866
1982	(2)	1	19,936	74,590
1983	26	151	19,234	108,268
1984	170	816	17,191	95,028
1985	13	56	14,958	72,046
1986	974	3,952	19,262	94,923
1987	2,213	6,889	31,403	130,251
1988	1,851	6,579	30,301	128,495
1989	1,013	3,638	33,332	131,142
1990	1,059	3,561	39,169	151,197
1991	635	2,324	38,370	155,307

(1) Data for 1978 through 1991 are preliminary. (2) Less than 500 lb.

HISTORICAL TOTAL ATLANTIC AND GULF CATCH OF SEA AND BAY SCALLOPS

1950 - 1991



DATA COLLECTION. While data on commercial fisheries have been collected for many years, detailed statistical information on marine recreational fishing is also required to support a variety of fishery management and development purposes. These include the objectives of the Magnuson Fishery Conservation and Management Act, Public Law 94-265, as amended. However, the lack of a continuous or systematic collection of marine recreational fishery data had prevented the accomplishment of these goals. Therefore, NMFS began a new comprehensive Marine Recreational Fishery Statistical Survey (MRFSS) in 1979. Surveys have been conducted in the following areas and years:

Atlantic and Gulf, 1979 through 1991
Pacific, mid-1979 through 1989
Western Pacific, 1979 through 1981
Caribbean, 1979, 1981

Preliminary estimates of catch and trips from the MRFS for the Atlantic and Gulf for 1991 are presented in the following tables. Summary graphs for 1981-1991 catch and trips are also shown. The survey is being conducted in 1992 along the Atlantic and Gulf coasts.

These MRFS consist of an intercept survey of fishermen in the field and an independent telephone survey of households. Each component survey provides certain information that is combined to produce estimates of recreational catch, fishing effort and participation. Estimates are generated by subregion or state, species, mode and area of fishing. In addition, information on catch rates and measurements of fish lengths and weights are obtained.

The MRFS is only one of several NMFS efforts to obtain data on recreational fisheries. Specialized surveys on particular fisheries or to obtain socio-economic data are also conducted by NMFS.

DATA TABLES. The MRFS catch data show the total number of fish caught for twenty frequently caught species groups on the Atlantic and Gulf coasts. Total number caught includes those fish which were brought ashore in whole form and were available for identification, weighing, and measuring as well as those fish which were not available for identification. This latter category includes those fish which were used for

bait, discarded, filleted or released alive. Each fisheries group may contain one or more species, genera, or families.

Tables show the distribution of total catch by subregion, fishing area and mode. The fishing areas are: ocean 3 miles or less from land, ocean more than 3 miles from land, and inland (sounds, river, bays). However, ocean data for the Gulf coast of Florida are reported as 10 miles or less from land and more than 10 miles from land.

The fishing modes are: shore (man-made structures and beach/bank from previous surveys), party/charter boat, and private/rental boat. However, in 1991 partyboats were not sampled by the MRFS in the South Atlantic and Gulf subregions, so party/charter estimates include only charterboats in these areas.

The trip tables indicate the estimated number of fishing trips by coastal residents (generally residing within 25 miles of the coast), non-coastal residents of the subregion bordering saltwater, and non-residents. They also include the estimated number of trips by fishing mode.

The 1991 survey did not include Texas or the January and February period for Georgia, South Carolina and the Atlantic coast states north of North Carolina. The data presented below will be finalized in a separate MRFS report to be published later this year.

PRELIMINARY 1991 MRFS DATA. The Atlantic and Gulf coasts marine recreational finfish catch in 1991 was an estimated 379.5 million fish. These fish were taken on an estimated 59.1 million fishing trips. The harvested catch was estimated at 186.0 million fish weighing approximately 233.0 million pounds.

In terms of number of fish, frequently caught species in 1991 were herrings, spotted seatrout, saltwater catfishes, summer flounder, pinfish, spot, bluefish, Atlantic croaker and black sea bass. Top-ranked species in each subregion in 1991 were scup in the North Atlantic, spot in both the Mid-Atlantic and South Atlantic, and spotted seatrout in the Gulf of Mexico. The Gulf (43 percent) and Mid-Atlantic (35 percent) subregions accounted for the highest numbers of Atlantic and Gulf coast fishes.

U.S. MARINE RECREATIONAL FISHERIES

The inland, ocean 3 miles or less from shore, and ocean 10 miles or less from shore areas accounted for approximately 89 percent of the Atlantic and Gulf coasts catch in number. The remaining 11 percent of the catch in number was from the Exclusive Economic Zone (EEZ), the principal area of NMFS management authority. However, for some species (e.g., red snapper) over 70 percent of the catch was made in the EEZ.

Sixty-eight percent of the Atlantic and Gulf coasts catch was taken in the private/rental boat mode in 1991. However, other modes were im-

portant for particular species such as king mackerel from the charter boat mode and kingfishes from the shore mode. Overall, shore-mode catches were 28 percent of the total and party/charter boat catches (excluding South Atlantic and Gulf partyboats) were 4 percent of the total.

Coastal residents accounted for 74 percent of the Atlantic and Gulf trips made in 1991. Non-residents accounted for an additional 22 percent of the trips. Total trips in the Mid-Atlantic exceeded all other subregions.



U.S. MARINE RECREATIONAL FISHERIES

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ESTIMATED TOTAL NUMBER OF FISH CAUGHT BY MARINE RECREATIONAL ANGLERS BY SPECIES GROUP AND SUBREGION:

ATLANTIC AND GULF COASTS, JANUARY 1991 - DECEMBER 1991

Species group	North Atlantic	Mid-Atlantic	South Atlantic	Gulf of Mexico	Total
	-----Thousands-----				
Herrings.....	526	2,723	2,838	25,293	31,379
Saltwater catfishes....	*	*	3,746	12,969	16,715
Black sea bass.....	95	11,027	1,775	2,694	15,591
Bluefish.....	5,039	10,576	2,547	849	19,011
Red snapper.....	*	*	85	1,375	1,461
Scup.....	10,488	7,073	-	*	17,575
Pinfish.....	*	-	2,783	13,004	15,789
Sheepshead.....	*	-	1,290	2,068	3,359
Spotted seatrout.....	*	226	3,601	25,487	29,314
Weakfish.....	19	2,151	318	*	2,488
Sand seatrout.....	*	*	*	4,785	4,785
Spot.....	*	22,369	4,582	370	27,320
Kingfishes.....	*	943	2,800	1,438	5,181
Atlantic croaker.....	*	17,892	3,143	6,589	27,625
Red drum.....	*	36	1,324	6,569	7,929
Mulletts.....	*	679	2,333	2,284	5,296
King mackerel.....	-	-	635	781	1,433
Summer flounder.....	278	15,037	1,059	*	16,375
Winter flounder.....	969	4,241	*	*	5,210
Other fishes.....	10,953	38,570	19,614	56,548	125,685
Total.....	28,369	133,560	54,488	163,102	379,519

Note:-- A dash (-) denotes an estimate of less than thirty thousand which is included in row and column totals. An asterisk (*) denotes none reported. Figures for the Gulf of Mexico do not include the recreational catch for Texas. Figures for the South Atlantic and Gulf of Mexico do not include catches for partyboats. Row and column totals may not add due to rounding.

ESTIMATED TOTAL NUMBER OF FISH CAUGHT BY MARINE RECREATIONAL ANGLERS BY SPECIES GROUP AND FISHING MODE:

ATLANTIC AND GULF COASTS, JANUARY 1991 - DECEMBER 1991.

Species group	Shore	Charter Boats	Party/ Charter Boats	Private/ Rental Boats	Total
	-----Thousands-----				
Herrings.....	11,615	357	35	19,371	31,379
Saltwater catfishes....	5,886	74	*	10,755	16,715
Black sea bass.....	1,940	132	2,491	11,027	15,591
Bluefish.....	8,997	76	1,389	8,548	19,011
Red snapper.....	62	467	*	932	1,461
Scup.....	2,034	*	1,356	14,186	17,575
Pinfish.....	7,552	67	*	8,169	15,789
Sheepshead.....	994	-	*	2,358	3,359
Spotted seatrout.....	2,546	438	*	26,330	29,314
Weakfish.....	307	-	83	2,095	2,488
Sand seatrout.....	2,142	56	*	2,587	4,785
Spot.....	8,666	-	540	18,114	27,320
Kingfishes.....	3,404	-	-	1,761	5,181
Atlantic croaker.....	6,605	-	277	20,730	27,625
Red drum.....	1,256	70	*	6,603	7,929
Mulletts.....	3,607	*	*	1,688	5,296
King mackerel.....	147	454	*	831	1,433
Summer flounder.....	1,823	-	834	13,716	16,375
Winter flounder.....	1,555	*	165	3,490	5,210
Other fishes.....	35,186	4,935	2,408	83,157	125,685
Total.....	106,324	7,162	9,584	256,449	379,519

Note:-- A dash (-) denotes an estimate of less than thirty thousand which is included in row and column totals. An asterisk (*) denotes none reported. Figures for Charter Boats include only catches in the South Atlantic and Gulf of Mexico excluding Texas. Figures for Party/Charter Boats are only for the North Atlantic and Mid-Atlantic subregions. Row and column totals may not add due to rounding.

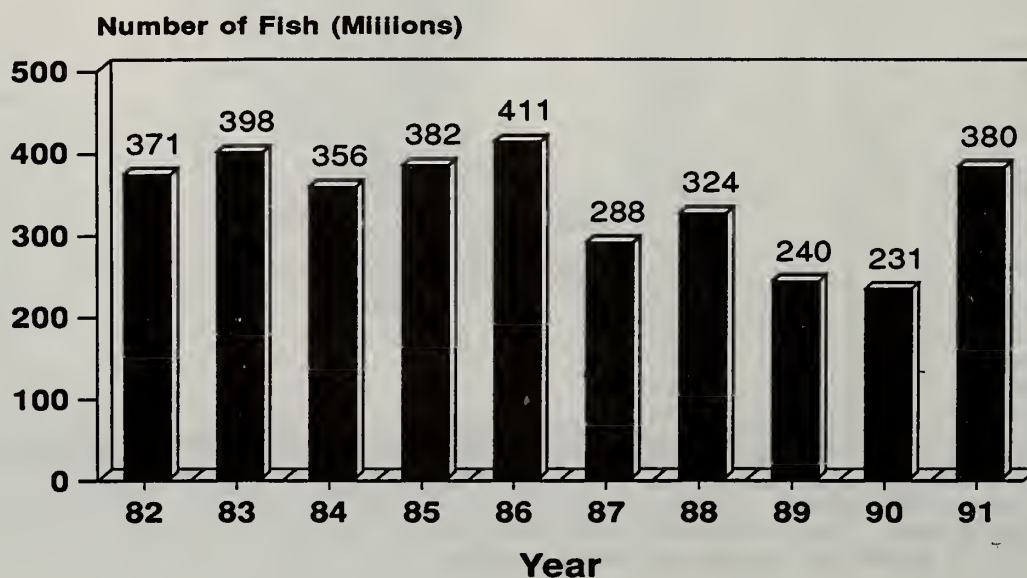
U.S. MARINE RECREATIONAL FISHERIES

ESTIMATED NUMBER OF FISH CAUGHT BY MARINE RECREATIONAL ANGLERS
BY SPECIES GROUP AND AREA OF FISHING:
ATLANTIC AND GULF COASTS, JANUARY 1991 - DECEMBER 1991

Species group	Ocean				Inland	Total
	3 Miles	Over	10 Miles	Over		
	or less	3 miles	or less	10 Miles		
	-----Thousands-----					
Herrings.....	2,843	201	7,035	1,779	19,521	31,379
Saltwater catfishes..	4,215	375	1,957	42	10,126	16,715
Black sea bass.....	2,559	5,530	1,510	523	5,468	15,591
Bluefish.....	6,300	1,912	390	-	10,404	19,011
Red snapper.....	46	980	265	72	98	1,461
Scup.....	3,975	889	*	*	12,711	17,575
Pinfish.....	1,716	92	5,591	906	7,483	15,789
Sheepshead.....	510	-	102	*	2,724	3,359
Spotted seatrout.....	5,770	536	4,075	193	18,740	29,314
Weakfish.....	361	226	*	*	1,901	2,488
Sand seatrout.....	1,341	214	195	*	3,035	4,785
Spot.....	3,997	367	124	*	22,833	27,320
Kingfishes.....	2,191	36	694	*	2,260	5,181
Atlantic croaker.....	2,581	323	191	*	24,529	27,625
Red drum.....	1,583	35	693	82	5,535	7,929
Mulletts.....	1,274	81	552	-	3,387	5,296
King mackerel.....	205	498	607	80	43	1,433
Summer flounder.....	6,632	393	*	*	9,349	16,375
Winter flounder.....	622	59	*	*	4,530	5,210
Other fishes.....	21,162	12,800	28,759	10,695	52,269	125,685
Total.....	69,882	25,570	52,741	14,379	216,946	379,519

Note:--"Ocean 10 mi or less" and "ocean over 10 mi" refer only to the Florida Gulf coast where state jurisdiction extends to three marine leagues, approximately ten nautical miles. The total estimate is additive across the four areas. A dash (-) denotes an estimate of less than thirty thousand which is included in row and column totals. An asterisk (*) denotes none reported. Row and column totals may not add due to rounding. Figures do not include any recreational catches for Texas or partyboat catches for the South Atlantic and Gulf of Mexico.

MARINE RECREATIONAL FISHERIES CATCH ATLANTIC AND GULF COASTS, 1982 - 1991



Note: 1991 data are provisional.

U.S. MARINE RECREATIONAL FISHERIES

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ESTIMATED TOTAL NUMBER OF FISHING TRIPS BY MARINE RECREATIONAL ANGLERS BY SUBREGION AND AREA OF RESIDENCE: ATLANTIC AND GULF COASTS, JANUARY 1991 - DECEMBER 1991

Subregion	Trips by coastal residents	Trips by non-coastal residents	Non-resident trips	Total
Thousands				
North Atlantic.....	5,620	326	1,745	7,691
Mid-Atlantic.....	13,469	472	3,149	17,090
South Atlantic.....	12,843	1,036	3,766	17,645
Gulf of Mexico.....	11,935	142	4,640	16,717
Total.....	43,867	1,976	13,300	59,143

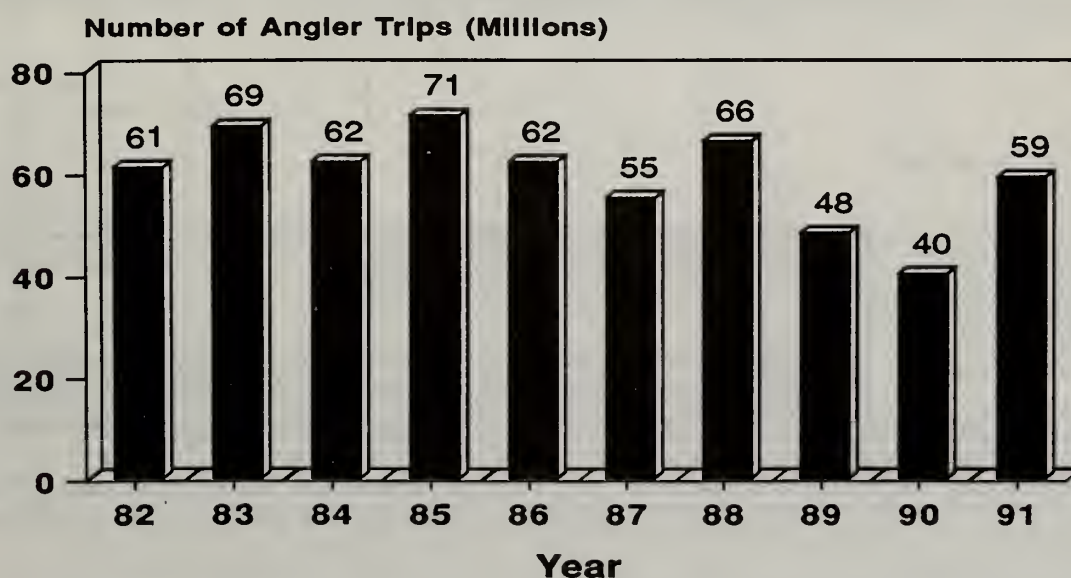
Note:--Estimates for the Gulf of Mexico exclude Texas. Estimates for the South Atlantic and Gulf of Mexico subregions exclude partyboat trips. Estimates also exclude January/February trips in the North Atlantic subregions and in the South Atlantic states north of Florida, as well as November/December trips in the North Atlantic states north of Massachusetts.

ESTIMATED TOTAL NUMBER OF FISHING TRIPS BY MARINE RECREATIONAL ANGLERS BY SUBREGION AND AREA OF RESIDENCE: ATLANTIC AND GULF COASTS, JANUARY 1991 - DECEMBER 1991.

Subregion	Shore	Charter Boats	Party/Charter Boats	Private/Rental Boats	Total
Thousands					
North Atlantic.....	3,644	*	223	3,824	7,691
Mid-Atlantic.....	5,906	*	960	10,224	17,090
South Atlantic.....	10,056	416	*	7,174	17,646
Gulf of Mexico.....	7,616	533	*	8,568	16,717
Total.....	27,222	949	1,183	29,790	59,144

Note:--An (*) denotes none reported. Figures for Charter Boats include only trips in the South Atlantic and Gulf of Mexico excluding Texas. Figures for Party/Charter Boats are only for the North Atlantic and Mid-Atlantic subregions. Row and column totals may not add due to rounding.

MARINE RECREATIONAL FISHING TRIPS ATLANTIC AND GULF COASTS, 1982 - 1991



Note: 1991 data are provisional.

U.S. EXCLUSIVE ECONOMIC ZONE

FOREIGN CATCH

ALL FOREIGN COUNTRIES: CATCH IN THE U.S. EXCLUSIVE ECONOMIC ZONE (EEZ),
BY COUNTRY, 1990 AND 1991

Country	North Atlantic (1)	Washington, Oregon, and California	Alaska			Grand total
			Gulf of Alaska	Eastern Bering Sea and Aleutian Islands	Total Alaska	
-----Metric tons, round weight-----						
1991:						
European Economic Community, Netherlands, Total.....	5,348.9	-	-	-	-	5,348.9
1990:						
German Democratic Republic.....	9,207.7	-	-	-	-	9,207.7
Poland.....	(2)	-	-	-	-	(2)
Grand Total.....	9,207.7	-	-	-	-	9,207.7

(1) Cape Hatteras, North Carolina, northward. (2) Included with German Democratic Republic.
Note:--Excludes tunas and prohibited species. For further information see text on page iv
FOREIGN CATCH IN U.S. EEZ. Catches are for calendar year only. Some fishing years overlap 2
calendar years.

ALL FOREIGN COUNTRIES: CATCH IN THE U.S. EXCLUSIVE ECONOMIC ZONE (EEZ),
BY SPECIES AND AREA, 1990 AND 1991

Species	North Atlantic (1)	Washington, Oregon, and California	Alaska			Grand total
			Gulf of Alaska	Eastern Bering Sea and Aleutian Islands	Total Alaska	
-----Metric tons, round weight-----						
1991:						
Herrings, river (alewives)	(2)	-	-	-	-	(2)
Mackerel, Atlantic.....	5,348.9	-	-	-	-	5,348.9
Other finfish.....	(2)	-	-	-	-	(2)
Grand total.....	5,348.9	-	-	-	-	5,348.9
1990:						
Butterfish.....	(3)	-	-	-	-	(3)
Hake:						
Atlantic, silver						
(whiting).....	(3)	-	-	-	-	(3)
Herrings, river (alewives)	14.1	-	-	-	-	14.1
Mackerel, Atlantic.....	8,670.6	-	-	-	-	8,670.6
Other finfish.....	523.0	-	-	-	-	523.0
Total fish.....	9,207.7	-	-	-	-	9,207.7
Squid, Atlantic:						
Short-finned.....	(3)	-	-	-	-	(3)
Long-finned.....	(3)	-	-	-	-	(3)
Total shellfish.....	(3)	-	-	-	-	(3)
Grand total.....	9,207.7	-	-	-	-	9,207.7

(1) Cape Hatteras, North Carolina, northward. (2) Included with Atlantic mackerel.

(3) Included with other finfish.

Note:--Excludes tunas and prohibited species. For further information see text on page iv FOREIGN
CATCH IN U.S. EEZ. Catches are for calendar year only. Some fishing years overlap 2 calendar
years.

U.S. EXCLUSIVE ECONOMIC ZONE

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FOREIGN CATCH

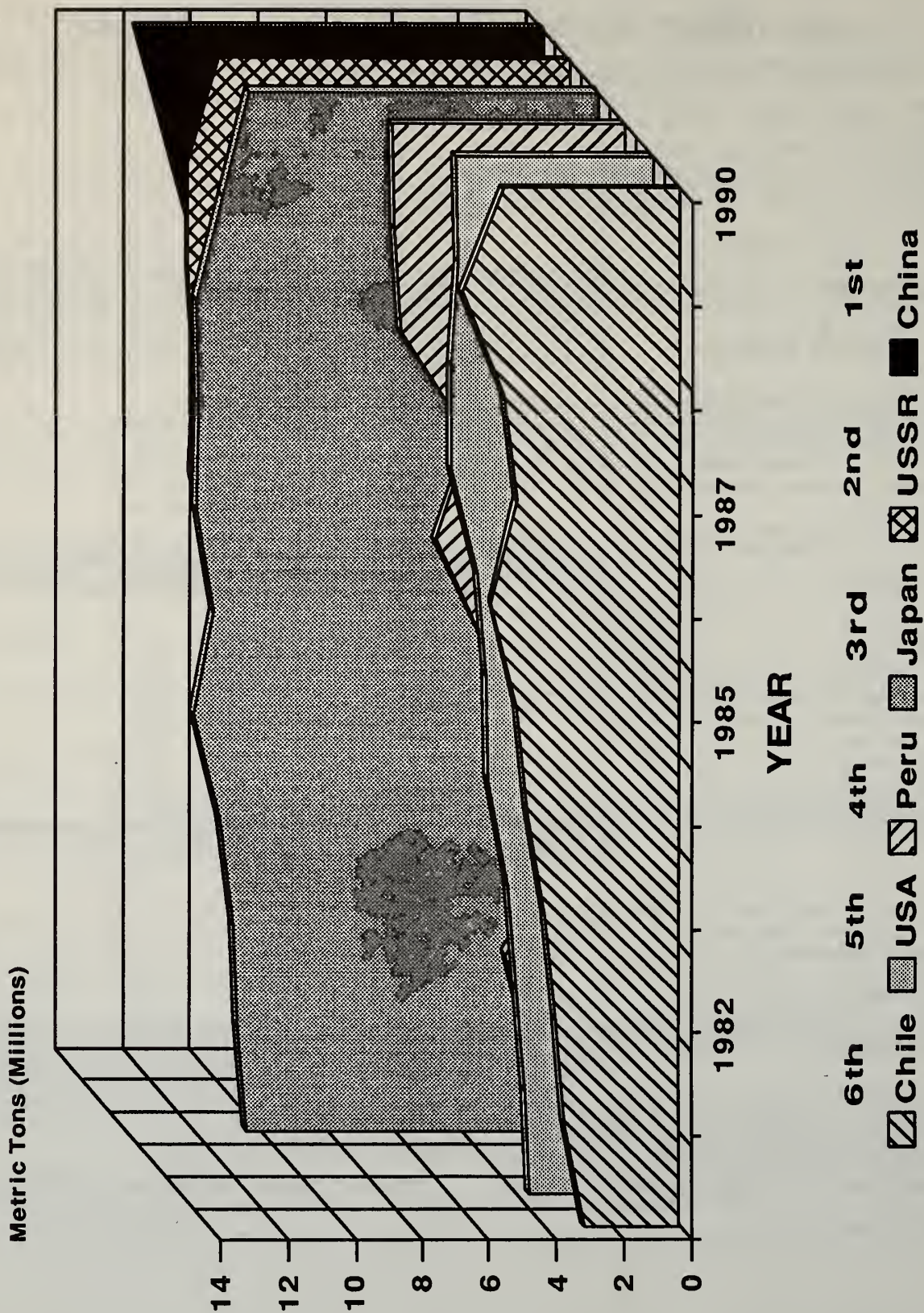
NORTH ATLANTIC: FOREIGN CATCH, BY COUNTRY AND SPECIES, 1989-91

Country and species	1989	1990	1991
-----Metric tons, round weight-----			
European Economic Community:			
Netherlands:			
Hake, silver (whiting).....	(1)	-	-
Herring, river (alewives)....	(1)	-	(2)
Mackerel, Atlantic.....	(1)	-	5,348.9
Other finfish.....	(1)	-	(2)
Squid: Short-finned.....	(1)	-	-
Long-finned.....	(1)	-	-
Total.....	(1)	-	5,348.9
Total, European Economic Community.....	(1)	-	5,348.9
German Democratic Republic:			
Butterfish.....	0.9	(3)	-
Hake, silver (whiting).....	7.2	(3)	-
Herring, river (alewives).....	22.2	14.1	-
Mackerel, Atlantic.....	17,909.8	8,670.6	-
Other finfish.....	67.1	523.0	-
Squid: Short-finned.....	(3)	-	-
Long-finned.....	1.6	(3)	-
Total.....	18,008.8	9,207.7	-
Poland:			
Butterfish.....	(3)	(4)	-
Hake: Red.....	(3)	-	-
Silver (whiting).....	11.1	(4)	-
Herring, river (alewives).....	28.0	(4)	-
Mackerel, Atlantic.....	7,499.1	(4)	-
Other finfish.....	63.4	(4)	-
Squid: Short-finned.....	-	(4)	-
Long-finned.....	1.9	-	-
Total.....	7,603.5	(4)	-
USSR:			
Hake, silver (whiting).....	(3)	-	-
Herring, river (alewives).....	26.0	-	-
Mackerel, Atlantic.....	11,414.1	-	-
Other finfish.....	49.3	-	-
Squid: Short-finned.....	(3)	-	-
Long-finned.....	(3)	-	-
Total.....	11,489.4	-	-
Grand total.....	37,101.7	9,207.7	5,348.9

(1) Included with USSR catch. (2) Included with Atlantic mackerel. (3) Included with other finfish. (4) Included with German Democratic Republic other finfish.

Note:--Excludes tunas and prohibited species. For further information see text on page iv FOREIGN CATCH IN U.S. EEZ. Catches are for calendar year only. Some fishing years overlap 2 calendar years.

WORLD COMMERCIAL CATCH BY LEADING COUNTRIES 1980 - 1990



U.S. AND WORLD COMMERCIAL FISH CATCHES, 1955-90

Year	U.S. commercial catch and exvessel value			World commercial catch				
	Published by U.S. (excludes weight of mollusk shells)	Published by FAO (1)	Exvessel value	Fresh-water	Marine			Grand total
					Peruvian anchovy	Other (2)	Total	
	<u>Million metric tons</u> <u>Live weight</u>		<u>Billion</u> <u>dollars</u>		<u>-Million metric tons-</u> <u>Live weight</u>			
1955....	2.2	2.8	0.3	3.4	0.0	25.5	25.5	28.9
1956....	2.4	3.0	0.4	3.5	0.1	27.2	27.3	30.8
1957....	2.2	2.8	0.4	3.9	0.3	27.5	27.8	31.7
1958....	2.2	2.7	0.4	4.5	0.8	28.0	28.8	33.3
1959....	2.3	2.9	0.4	5.1	2.0	29.8	31.8	36.9
1960....	2.2	2.8	0.4	5.6	3.5	31.1	34.6	40.2
1961....	2.4	2.9	0.4	5.7	5.3	32.6	37.9	43.6
1962....	2.4	3.0	0.4	5.8	7.1	31.9	39.0	44.8
1963....	2.2	2.8	0.4	5.9	7.2	33.5	40.7	46.6
1964....	2.1	2.6	0.4	6.2	9.8	35.9	45.7	51.9
1965....	2.2	2.7	0.4	7.0	7.7	38.5	46.2	53.2
1966....	1.9	2.5	0.5	7.3	9.6	40.4	50.0	57.3
1967....	1.8	2.4	0.4	7.2	10.5	42.7	53.2	60.4
1968....	1.9	2.5	0.5	7.4	11.3	45.2	56.5	63.9
1969....	1.9	2.5	0.5	7.6	9.7	45.4	55.1	62.7
1970....	2.2	2.8	0.6	8.4	13.1	46.6	59.7	65.6
1971....	2.3	2.9	0.7	9.0	11.2	48.3	59.5	66.1
1972....	2.2	2.8	0.7	5.7	4.8	53.7	58.5	62.0
1973....	2.2	2.8	0.9	5.7	1.7	55.3	57.0	62.7
1974....	2.3	2.8	0.9	5.8	4.0	56.7	60.7	66.5
1975....	2.2	2.8	1.0	6.2	3.3	56.9	60.2	66.4
1976....	2.4	3.0	1.3	5.9	4.3	59.6	63.9	69.8
1977....	2.4	3.0	1.5	6.1	0.8	62.0	62.8	68.9
1978....	2.7	3.4	1.9	5.8	1.2	63.6	64.8	70.6
1979....	2.8	3.5	2.2	5.9	1.4	63.8	65.2	71.1
1980....	2.9	3.6	2.2	6.2	0.7	65.1	65.8	72.0
1981....	2.7	3.8	2.4	6.6	1.2	67.0	68.2	74.8
1982....	2.9	4.0	2.4	8.5	1.8	66.9	68.7	77.2
1983....	2.9	4.3	2.4	9.3	0.1	68.2	68.3	77.6
1984....	2.9	5.0	2.3	10.0	0.1	73.8	73.9	83.9
1985....	2.8	4.9	2.3	10.7	1.0	74.7	75.7	86.4
1986....	2.7	5.2	2.8	11.7	4.9	76.2	81.1	92.8
1987....	3.1	6.0	3.1	12.7	2.1	79.6	81.7	94.4
1988....	3.3	5.9	3.5	13.5	3.6	82.0	85.6	99.1
1989....	3.8	5.8	3.2	13.8	5.4	81.1	86.5	100.3
1990....	4.3	5.9	3.5	14.4	3.8	79.0	82.8	97.2

(1) Includes U.S.-flag vessel landings at foreign ports, transfer of catches onto foreign vessels within the U.S. EEZ (joint ventures), and the weight of mollusk shells. (2) Includes diadromous fishes including salmon and other anadromous fishes and catadromous fishes such as eels.

Note:--There are 2,204.6 pounds in a metric ton. Prior to 1970, the world commercial catch of whales and seals is excluded. For the years 1970-1990, data for marine mammals and aquatic plants are excluded. There is a revision in the total world commercial catch back to 1970 as published in FAO Yearbook of Fishery Statistics, Vol. 48 and 50. However, prior to 1974, data on freshwater and marine catches were not revised. Therefore, for the years 1970 to 1973, data will not add to the grand total.

Source:--Fishery Statistics of the United States; Fisheries of the United States; Food and Agriculture Organization of the United Nations (FAO) - Yearbook of Fishery Statistics, Rome; various issues.

WORLD FISHERIES

WORLD COMMERCIAL CATCH OF FISH, CRUSTACEANS, AND MOLLUSKS, BY COUNTRIES, 1986-90
(DOES NOT INCLUDE MARINE MAMMALS AND AQUATIC PLANTS)

Country	1986 (1)	1987 (1)	1988 (1)	1989 (1)	1990
-----Thousand metric tons----- <u>Live weight</u>					
China.....	8,000	9,346	10,358	11,219	12,095
USSR.....	11,259	11,159	11,332	11,310	10,389
Japan.....	11,976	11,848	11,966	11,173	10,353
Peru.....	5,616	4,587	6,641	6,853	6,875
United States (2).....	5,166	5,986	5,937	5,763	5,856
Chile.....	5,571	4,814	5,209	6,454	5,195
India.....	2,923	2,907	3,126	3,641	3,790
Indonesia.....	2,456	2,583	2,789	2,948	3,080
Republic of Korea.....	3,103	2,876	2,727	2,832	2,750
Thailand.....	2,536	2,779	2,642	2,781	2,650
Philippines.....	1,916	1,988	2,010	2,098	2,208
Korea (3).....	1,700	1,700	1,700	1,700	1,750
Norway.....	1,913	1,949	1,839	1,908	1,747
Canada.....	1,512	1,565	1,609	1,572	1,624
Denmark.....	1,848	1,706	1,971	1,927	1,517
Iceland.....	1,658	1,632	1,759	1,504	1,507
Spain.....	1,488	1,524	1,592	1,559	1,458
Mexico.....	1,315	1,419	1,372	1,469	1,401
France.....	879	851	892	913	896
Vietnam.....	824	871	874	868	850
Bangladesh.....	796	817	829	843	847
Brazil.....	940	933	829	850	800
Burma.....	686	685	704	733	743
Malaysia.....	621	619	612	607	602
United Kingdom.....	629	665	665	588	581
Morocco.....	595	494	551	520	565
New Zealand.....	345	418	550	565	565
Argentina.....	420	559	493	486	555
South Africa.....	819	1,424	1,299	878	536
Italy.....	568	560	576	551	525
Pakistan.....	415	427	445	446	479
Poland.....	645	670	654	564	473
Netherlands.....	454	446	398	451	438
Ghana.....	319	382	362	361	391
Ecuador.....	1,003	680	875	739	391
Turkey.....	582	627	676	457	382
Tanzania.....	309	342	392	377	377
All others.....	9,024	9,561	9,807	9,825	10,005
Total.....	92,829	94,399	99,062	100,333	97,246

(1) Revised.

(2) Includes the weight of clam, oyster, scallop, and other mollusk shells. This weight is not included in U.S. landings statistics shown elsewhere.

(3) Data estimated by FAO.

Note:--Statistics on quantities caught by recreational fishermen in the United States are excluded.

Source:--Food and Agriculture Organization of the United Nations (FAO) - Yearbook of Fishery Statistics, 1990, Vol. 70, Rome.

WORLD COMMERCIAL CATCH OF FISH, CRUSTACEANS, AND MOLLUSKS, BY CONTINENT, 1986-90
(DOES NOT INCLUDE MARINE MAMMALS AND AQUATIC PLANTS)

Continent	1986 (1)	1987 (1)	1988 (1)	1989 (1)	1990
-----Thousand metric tons----- Live weight					
North America.....	8,639	9,634	9,551	9,516	9,525
South America.....	14,123	12,158	14,594	16,000	14,414
Europe.....	12,760	12,752	13,066	12,481	11,467
USSR.....	11,260	11,159	11,332	11,310	10,389
Asia.....	40,735	42,548	44,149	45,035	45,337
Africa.....	4,628	5,358	5,445	5,076	5,164
Oceania.....	684	790	925	915	950
Total.....	92,829	94,399	99,062	100,333	97,246

(1) Revised.

Source:--Food and Agriculture Organization of the United Nations (FAO) - Yearbook of Fishery Statistics, 1990; Vol. 70, Rome.

WORLD COMMERCIAL CATCH OF FISH, CRUSTACEANS, AND MOLLUSKS, BY MAJOR FISHING
AREAS, 1986-90 (DOES NOT INCLUDE MARINE MAMMALS AND AQUATIC PLANTS)

Area	1986 (1)	1987 (1)	1988 (1)	1989 (1)	1990
-----Thousand metric tons----- Live weight					
Marine Areas:					
Pacific Ocean....	50,738	49,755	53,455	54,977	52,924
Atlantic Ocean...	25,113	26,501	26,508	25,327	23,639
Indian Ocean.....	5,212	5,440	5,682	6,147	6,239
Total.....	81,063	81,696	85,645	86,451	82,802
Inland waters:					
North America....	484	573	532	537	537
South America....	362	386	357	340	333
Europe.....	459	449	478	479	473
USSR.....	927	988	996	1,020	975
Asia.....	7,844	8,563	9,187	9,618	10,197
Africa.....	1,670	1,722	1,844	1,865	1,905
Oceania.....	20	22	23	23	24
Total.....	11,766	12,703	13,417	13,882	14,444
Grand total...	92,829	94,399	99,062	100,333	97,246

(1) Revised.

Source:--Food and Agriculture Organization of the United Nations (FAO) - Yearbook of Fishery Statistics, 1990; Vol. 70, Rome.

WORLD FISHERIES

WORLD COMMERCIAL CATCH OF FISH, CRUSTACEANS, AND MOLLUSKS, BY SPECIES GROUPS, 1986-90, (DOES NOT INCLUDE MARINE MAMMALS AND AQUATIC PLANTS)

Species group	1986 (1)	1987 (1)	1988 (1)	1988 (1)	1990
-----Thousand metric tons----- Live weight					
Cods, hakes, haddocks.....	13,571	13,786	13,636	12,905	11,944
Flatfish.....	1,314	1,292	1,342	1,204	1,208
Herrings, sardines, anchovies...	23,984	22,392	24,387	24,769	22,146
Jacks, mullets, sauries.....	7,479	8,296	9,128	9,360	9,700
Mackerel, snoeks, cutlassfishes.	4,007	3,644	3,862	3,755	3,585
Redfish, basses, congers.....	5,956	5,711	5,702	5,908	5,526
Salmons, trouts, smelts.....	1,091	1,092	1,171	1,456	1,499
Sharks, rays, chimaeras.....	630	667	688	681	709
Tunas, bonitos, billfishes.....	3,475	3,621	4,047	4,097	4,223
Other fishes.....	20,325	21,572	22,406	23,072	23,887
Crabs.....	899	973	1,054	1,168	1,138
Lobsters.....	222	229	224	209	216
Shrimp.....	2,236	2,372	2,506	2,480	2,527
Other crustaceans.....	724	695	674	714	702
Clams, cockles, arkshells.....	1,421	1,485	1,464	1,480	1,488
Mussels.....	1,008	1,139	1,292	1,330	1,325
Oysters.....	1,083	1,112	1,095	1,043	1,029
Scallops.....	531	739	868	839	877
Squids, cuttlefishes, octopus...	1,746	2,318	2,287	2,709	2,355
Other mollusks.....	779	899	948	837	873
Miscellaneous.....	348	365	281	317	289
Total.....	92,829	94,399	99,062	100,333	97,246

(1) Revised.

Source:--Food and Agriculture Organization of the United Nations (FAO) - Yearbook of Fishery Statistics, 1990, Vol. 70, Rome.

DISPOSITION OF WORLD COMMERCIAL CATCH, 1986-90
(DOES NOT INCLUDE MARINE MAMMALS AND AQUATIC PLANTS)

Item	1986 (1)	1987 (1)	1988 (1)	1989 (1)	1990
-----Percent of total-----					
Marketed fresh.....	19.5	21.0	22.2	21.3	21.4
Frozen.....	23.6	23.6	23.1	23.4	23.6
Canned.....	12.5	12.4	12.0	12.1	12.2
Cured.....	14.1	14.5	14.0	14.1	14.0
Reduced to meal and oil (2).....	29.0	27.2	27.4	27.7	27.5
Miscellaneous purposes.....	1.3	1.3	1.3	1.4	1.3
Total.....	100.0	100.0	100.0	100.0	100.0

(1) Revised.

(2) Only whole fish destined for the manufacture of oils and meals are included. Raw material for reduction derived from fish primarily destined for marketing fresh, frozen, canned, cured, and miscellaneous purposes is excluded; such waste quantities are included under the other disposition channels.

Source:--Food and Agriculture Organization of the United Nations (FAO) - Yearbook of Fishery Statistics, 1990, Vol. 71, Rome.

WORLD IMPORTS AND EXPORTS OF SEVEN FISHERY COMMODITY GROUPS,
BY LEADING COUNTRIES, 1987-90

Country	1987 (1)	1988 (1)	1989 (1)	1990
-----Thousand U.S. dollars-----				
IMPORTS				
Japan.....	8,308,077	10,657,717	10,127,471	10,668,292
United States.....	5,662,329	5,389,345	5,756,927	5,573,221
France.....	2,021,868	2,243,783	2,193,878	2,809,033
Italy.....	1,738,226	1,898,823	1,984,470	2,458,086
Spain.....	1,321,771	1,725,879	1,816,160	2,360,653
United Kingdom.....	1,386,818	1,610,006	1,627,924	1,911,161
Fed. Rep. of Germany..	1,268,965	1,428,863	1,479,366	1,899,729
Denmark.....	842,476	852,440	864,219	1,116,108
Hong Kong.....	794,280	1,030,588	988,063	1,111,938
Netherlands.....	509,430	577,895	671,949	843,510
Thailand.....	267,149	537,918	726,846	755,307
Belgium.....	529,941	582,893	603,053	753,676
Canada.....	511,901	593,327	659,238	651,174
Portugal.....	424,716	457,133	390,589	606,040
Taiwan.....	308,247	403,227	452,004	426,768
Switzerland.....	332,826	362,960	345,236	390,226
Republic of Korea.....	212,712	314,967	317,091	364,739
Sweden.....	404,897	421,347	408,338	448,430
Australia.....	284,997	304,853	373,007	344,031
Other Countries.....	3,405,141	3,950,897	4,134,875	4,291,878
Total.....	30,536,767	35,344,861	35,920,704	39,784,000
EXPORTS				
United States.....	1,824,788	2,441,176	2,532,444	3,019,857
Canada.....	2,092,170	2,206,439	2,051,251	2,269,765
Thailand.....	1,261,066	1,630,891	1,959,427	2,264,938
Denmark.....	1,750,652	1,852,665	1,745,056	2,165,497
Norway.....	1,474,930	1,608,071	1,563,496	2,059,784
China.....	912,476	1,398,576	1,392,904	1,622,121
Taiwan.....	1,742,028	1,751,539	1,591,648	1,514,967
Republic of Korea.....	1,540,072	1,784,068	1,538,408	1,363,296
Netherlands.....	953,177	948,156	1,061,338	1,332,900
Iceland.....	1,071,067	1,059,371	1,026,990	1,240,299
Chile.....	635,583	804,746	899,950	866,397
Japan.....	889,827	1,037,341	919,180	807,456
Spain.....	474,752	650,542	775,763	743,506
Indonesia.....	441,079	664,483	767,422	978,650
USSR.....	637,287	799,633	718,407	933,448
France.....	654,464	730,885	772,724	931,193
United Kingdom.....	717,418	728,044	770,904	907,007
Hong Kong.....	511,518	744,294	708,309	693,755
Fed. Rep. of Germany..	437,934	494,151	553,257	665,504
Other Countries.....	10,046,326	11,520,073	11,958,084	12,694,517
Total.....	28,243,826	32,413,968	32,774,518	36,055,000

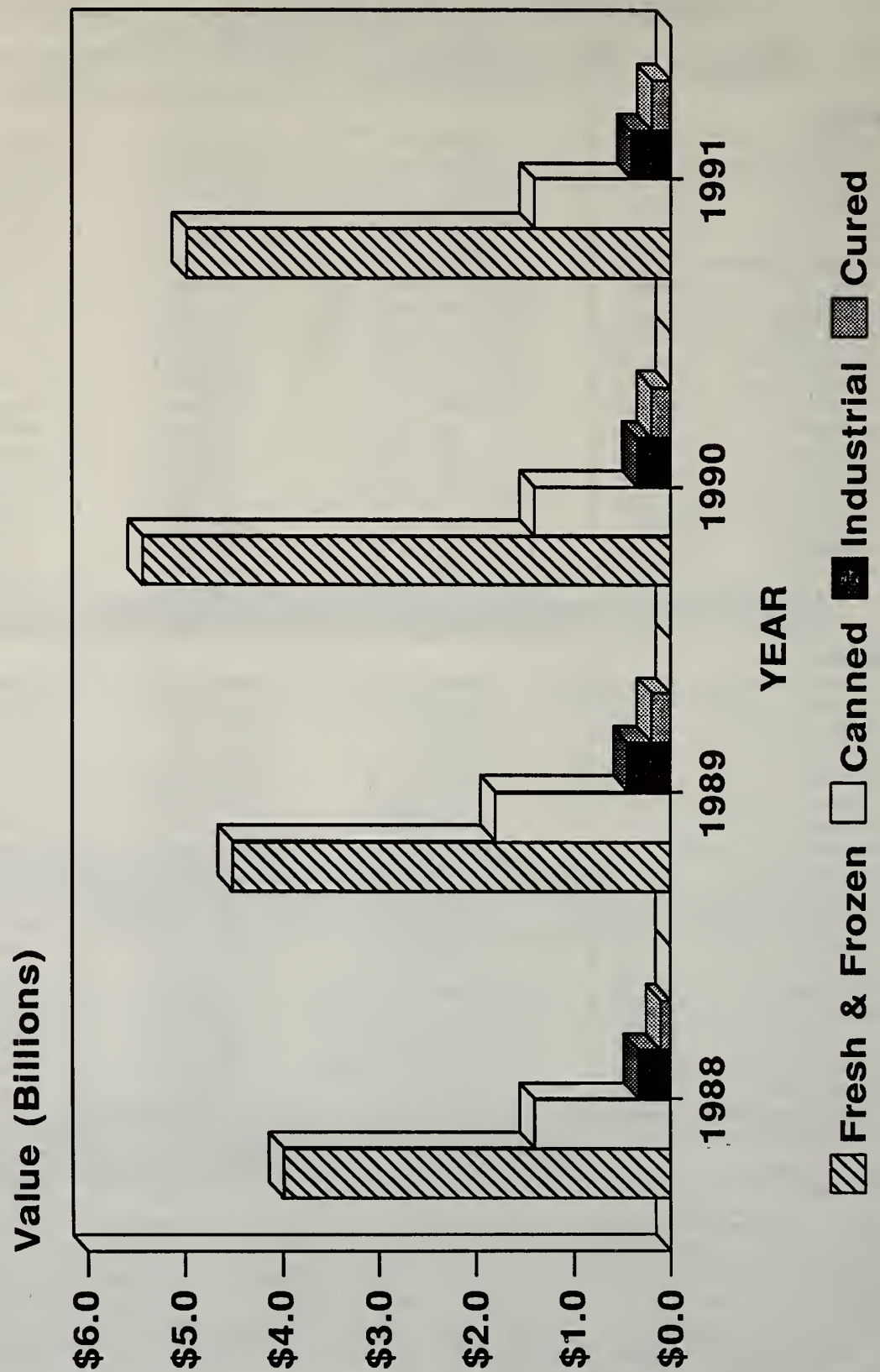
(1) Revised.

Note:--Data on imports and exports cover the international trade of 176 countries or areas. The total value of exports is consistently less than the total value of imports, probably because charges for insurance, freight, and similar expenses were included in the import value but not in the export value. The seven fishery commodity groups covered by this table are: 1. Fish, fresh, chilled or frozen; 2. Fish, dried, salted, or smoked; 3. Crustaceans and mollusks, fresh, dried, salted,, etc.; 4. Fish products and preparations, whether or not in airtight containers; 5. Crustacean and mollusk products and preparations, whether or not in airtight containers; 6. Oils and fats, crude or refined, of aquatic animal origin; and 7. Meals solubles, and similar animal foodstuffs of aquatic animal origin.

Source:--Food and Agriculture Organization of the United Nations (FAO) - Yearbook of Fishery Statistics, 1990, Vol. 71, Rome.

PROCESSED FISHERY PRODUCTS

VALUE OF PROCESSED FISHERY PRODUCTS
FROM DOMESTIC CATCH & IMPORTED PRODUCTS
1988 - 1991



33

Item	1990		1991 (1)	
	<u>Thousand dollars</u>	<u>Percent of total</u>	<u>Thousand dollars</u>	<u>Percent of total</u>
Edible:				
Fresh and frozen.....	5,429,898	73.4	4,968,352	70.9
Canned.....	1,414,846	19.1	1,439,362	20.5
Cured.....	203,039	2.7	185,967	2.7
Total edible.....	7,047,783	95.2	6,593,681	94.1
Industrial:				
Bait and animal food (canned).....	146,947	2.0	204,917	2.9
Meal, oil, and solubles.....	163,796	2.2	170,495	2.4
Other.....	42,759	0.6	37,707	0.5
Total industrial.....	353,502	4.8	413,119	5.9
Grand total.....	7,401,285	100.0	7,006,800	100.0

(1) Preliminary. May not add due to rounding.

Note:--Value is based on selling price at the plant. Processed Fishery Products, Annual Summary, 1991, Current Fishery Statistics No. 9103 will provide additional information.

YEAR	Fish sticks		Fish portions		Breaded shrimp	
	<u>Thousand pounds</u>	<u>Thousand dollars</u>	<u>Thousand pounds</u>	<u>Thousand dollars</u>	<u>Thousand pounds</u>	<u>Thousand dollars</u>
1982.....	91,178	105,516	304,104	385,894	94,391	282,026
1983.....	86,928	115,556	335,270	410,858	100,106	337,604
1984.....	92,441	109,677	333,212	413,789	94,522	386,222
1985.....	96,239	111,265	330,362	367,734	95,734	369,415
1986.....	87,289	94,290	341,628	393,956	107,834	354,808
1987.....	98,927	*142,946	323,746	*445,631	108,937	358,442
1988.....	80,148	113,868	301,229	438,873	99,471	371,798
1989.....	89,112	116,440	279,777	400,289	*120,950	*404,592
1990.....	65,209	74,866	242,775	352,589	110,760	353,265
1991.....	63,286	77,877	184,246	277,044	115,898	334,805

*Record. Records--1973 fish sticks production: 127,156,000 lb; 1973 fish portions production: 396,089,000 lb.

Note:-- Processed Fishery Products, Annual Summary, 1991, Current Fishery Statistics No. 9103 will provide additional information.

PROCESSED FISHERY PRODUCTS

FISH FILLETS AND STEAKS

PRODUCTION OF FRESH AND FROZEN FILLETS AND STEAKS, BY SPECIES, 1990 AND 1991

Species	1990 (1)		1991	
	<u>Thousand pounds</u>	<u>Thousand dollars</u>	<u>Thousand pounds</u>	<u>Thousand dollars</u>
Fillets:				
Anglerfish.....	3,910	12,480	5,669	17,075
Bluefish.....	301	547	276	352
Cod.....	65,393	132,399	72,050	179,058
Cusk.....	583	1,160	746	1,803
Dolphin.....	1,882	5,884	2,279	6,746
Flounders.....	54,231	153,548	41,683	130,086
Groundfish mixed.....	4,043	11,225	5,833	11,356
Groupers.....	2,062	9,915	1,720	9,212
Haddock.....	7,039	24,508	6,732	26,022
Hake, Atlantic.....	1,666	3,292	1,204	2,867
Halibut.....	2,740	11,865	1,655	7,591
Lingcod.....	1,171	2,035	1,417	2,623
Ocean perch:				
Atlantic.....	396	1,160	388	1,043
Pacific.....	1,188	1,947	730	1,263
Ocean pout.....	1,024	1,611	748	843
Pollock:				
Atlantic.....	11,770	20,977	7,235	17,800
Alaska.....	164,411	174,317	160,647	209,008
Rockfishes.....	32,885	53,551	15,520	25,314
Sablefish.....	4,393	6,822	3,048	5,055
Salmon.....	7,059	26,960	3,458	14,521
Sea trout.....	381	764	348	933
Shark.....	10,457	17,127	8,480	9,136
Snapper:				
Red.....	300	1,563	207	1,099
Unclassified.....	1,098	6,588	749	4,280
Spanish mackerel.....	531	455	520	426
Swordfish.....	2,945	17,759	1,627	10,097
Tuna.....	3,092	17,231	2,465	15,270
Whitefish.....	333	959	315	913
Wolffish.....	145	285	112	288
Yellow perch.....	406	2,231	300	1,648
Yellow pike.....	130	446	120	420
Unclassified.....	26,353	42,223	39,702	59,327
Total.....	414,318	763,834	387,983	773,475
Steaks:				
Halibut.....	11,430	43,246	6,313	23,376
King mackerel.....	79	261	72	149
Salmon.....	3,586	10,456	2,292	7,116
Shark.....	1,781	3,708	1,465	2,746
Swordfish.....	2,556	11,867	1,797	9,503
Unclassified.....	6,942	9,966	2,430	6,431
Total.....	26,374	79,504	14,369	49,321
Grand total.....	440,692	843,338	402,352	822,796

(1) Revised.

Note:--The following amounts of frozen fish blocks were produced from the fillets reported above: 9,738,624 lb valued at \$9,577,928 in 1990, and 22,103,439 lb valued at \$19,931,043 in 1991. Final data will be published in Processed Fishery Products, Annual Summary, 1991, Current Fishery Statistics No. 9103.

CANNED FISHERY PRODUCTS

PRODUCTION OF CANNED FISHERY PRODUCTS, BY SPECIES, 1990 AND 1991

Species	Pounds per case	1990			1991		
		Standard cases	Thousand pounds	Thousand dollars	Standard cases	Thousand pounds	Thousand dollars
For human consumption:							
Fish:							
Herring.....	23.4	249,680	5,843	9,725	248,740	5,821	8,402
Mackerel.....	45	520,569	23,426	10,500	194,913	8,771	3,421
Salmon:							
Natural.....	48	4,091,311	196,383	365,979	4,078,000	195,744	412,936
Specialties.....	48	2,881	138	733	5,299	254	1,181
Sardines, Maine....	23.4	565,823	13,240	17,301	597,675	13,986	18,746
Tuna:							
Solid.....	19.5	6,234,684	121,576	299,159	5,688,044	110,917	256,982
Chunk.....	19.5	23,484,108	457,940	601,613	24,603,510	479,768	617,704
Flakes.....	18	60,156	1,083	1,242	116,726	2,101	1,866
Total tuna.....	--	29,778,948	580,599	902,014	30,408,280	592,786	876,552
Specialties.....	48	85	4	22	81	4	24
Other.....	48	391,054	18,771	19,197	326,314	15,663	19,776
Total fish.....	--	35,600,351	838,404	1,325,471	35,859,302	833,029	1,341,038
Shellfish:							
Clam and clam products: (1)							
Whole and minced.	15	2,323,020	34,845	41,385	2,477,442	37,162	43,425
Chowder and juice	30	2,174,343	65,230	27,772	2,672,477	80,174	31,490
Specialties.....	48	200,488	9,623	7,319	243,895	11,707	9,029
Crabs, natural.....	19.5	35,645	695	3,810	3,961	77	283
Lobster meat and specialties.....							
	48	17,141	823	887	17,264	829	615
Oyster, specialties	48	12,858	617	534	31,167	1,496	1,595
Shrimp:							
Natural (2).....	6.75	105,245	710	2,878	93,675	632	3,837
Specialties.....	48	63	3	12	-	-	-
Other.....	48	125,253	6,012	4,778	336,847	16,169	8,050
Total shellfish.	--	4,994,056	118,558	89,375	5,876,728	148,246	98,324
Total for human consumption....	--	40,594,407	956,962	1,414,846	41,736,030	981,275	1,439,362
For bait and animal food:							
Animal food.....	48	4,609,042	221,234	146,444	8,424,080	404,356	204,414
Salmon eggs.....	48	1,793	86	503	1,761	84	503
Total for bait & animal food..	48	4,610,835	221,320	146,947	8,425,841	404,440	204,917
Grand total.....	--	45,205,242	1,178,282	1,561,793	50,161,871	1,385,715	1,644,279

(1) "Cut out" or "drained" weight of can contents are given for whole or minced clams, and net contents for other clam products.

(2) Drained weight.

Note:--Final figures will be published in Processed Fishery Products, Annual Summary, 1991, Current Fishery Statistics No. 9103.

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PROCESSED FISHERY PRODUCTS

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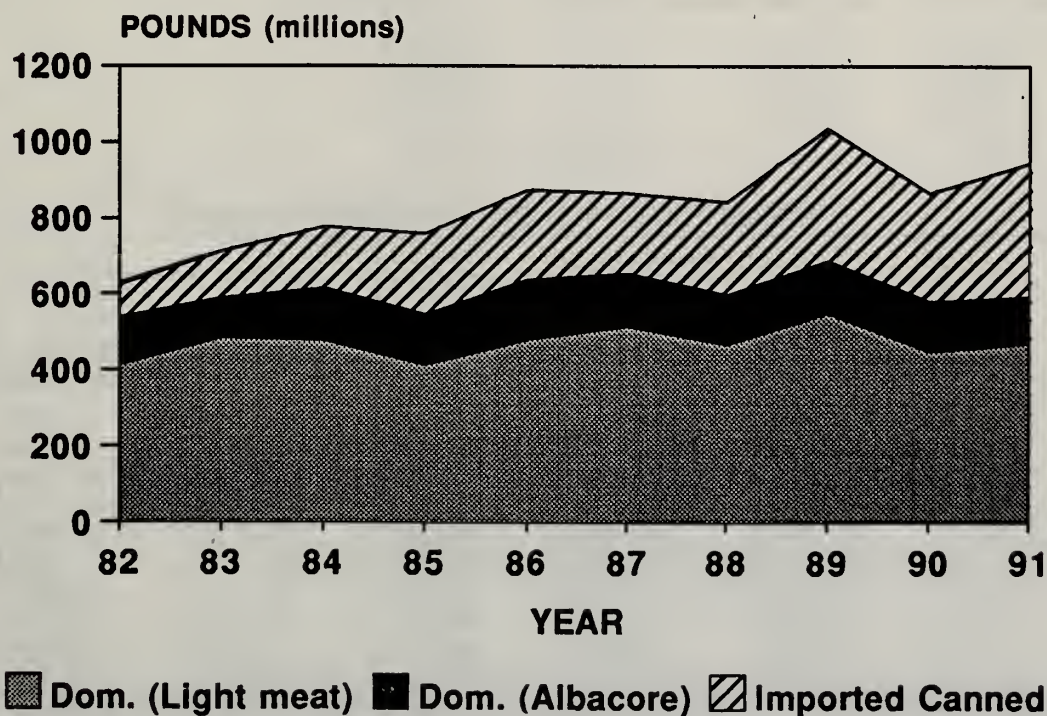
CANNED FISHERY PRODUCTS

PRODUCTION OF CANNED FISHERY PRODUCTS, 1982-91

Year	For human consumption		For animal food and bait		Total	
	Thousand pounds	Thousand dollars	Thousand pounds	Thousand dollars	Thousand pounds	Thousand dollars
1982.....	876,157	1,325,435	407,219	132,048	1,283,376	1,953,971
1983.....	987,329	1,393,604	403,466	140,874	1,390,795	1,534,478
1984.....	1,041,845	1,435,532	369,123	141,931	1,410,968	1,577,463
1985.....	913,078	1,269,311	248,068	91,003	1,161,146	1,360,314
1986.....	1,011,080	1,384,213	320,953	100,377	1,332,033	1,484,590
1987.....	965,012	1,476,484	220,641	85,416	1,185,653	1,561,900
1988.....	908,687	1,388,122	222,920	97,492	1,131,607	1,485,614
1989.....	*1,109,788	1,753,536	345,464	*238,343	1,455,252	*1,991,879
1990.....	956,962	1,414,846	221,320	146,947	1,178,282	1,561,793
1991.....	981,275	1,439,362	404,440	204,917	1,385,715	1,644,279

*Record. Records--1981 for human consumption: \$1,819,409,000; 1973 animal food and bait: 696,357,000 lb; 1973 total: 1,647,357,000 lb.

U.S. SUPPLY OF CANNED TUNA (CANNED WEIGHT) 1982 - 1991



PROCESSED FISHERY PRODUCTS

INDUSTRIAL PRODUCTS

PRODUCTION OF MEAL, OIL, AND SOLUBLES, 1990 AND 1991

Product	1990		1991	
	<u>Thousand pounds</u>	<u>Thousand dollars</u>	<u>Thousand pounds</u>	<u>Thousand dollars</u>
Dried scrap and meal:				
Fish:				
Menhaden (1).....	448,012	77,485	465,676	86,368
Tuna and mackerel....	66,290	8,772	66,016	8,918
Unclassified.....	40,846	33,028	67,264	31,867
Total.....	555,148	119,285	598,956	127,153
Shellfish.....	22,350	1,450	13,760	978
Total, scrap and meal	577,498	120,735	612,716	128,131
Solubles, total.....	185,660	14,067	169,607	12,111
Body oil:				
Menhaden (1).....	273,979	28,188	263,506	29,823
Unclassified.....	7,970	806	3,839	430
Total, oil.....	281,949	28,994	267,345	30,253

(1) May include small quantities made from other species.

Note:--To convert pounds of oil to gallons divide by 7.75. The above data include production in American Samoa and Puerto Rico. Final data will be published in Fishery Products, Annual Summary, 1991, Current Fisheries Statistics 9103.

PRODUCTION OF INDUSTRIAL PRODUCTS, 1982-91

Year	Quantity			Value		
	Meal	Solubles	Marine animal oil	Meal, solubles, and oil	Other industrial products	Grand total
	<u>-----Thousand pounds-----</u>			<u>-----Thousand dollars-----</u>		
1982.....	746,854	305,002	347,513	192,138	41,499	233,637
1983.....	763,536	317,006	*399,334	*212,606	39,785	252,391
1984.....	751,528	252,076	372,804	189,796	44,258	234,054
1985.....	721,682	323,028	285,077	144,724	37,775	182,499
1986.....	702,194	195,148	336,708	138,765	36,825	175,590
1987.....	*786,978	249,289	298,496	174,321	37,524	211,845
1988.....	643,796	223,449	224,733	188,843	46,737	235,580
1989.....	618,382	232,709	225,478	156,321	49,756	206,077
1990.....	577,498	185,660	281,949	163,796	42,759	206,555
1991.....	612,716	169,607	267,345	170,495	37,707	208,202

*Record. Record--1959 fish solubles production: 330,718,000 lb, 1980 other industrial products \$63,525,000 and 1980 grand total \$269,606,000.

Note:--Does not include the value of imported items that may be further processed.

U.S. COLD STORAGE HOLDINGS

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FROZEN FISHERY PRODUCTS

U.S. COLD STORAGE HOLDINGS OF FISHERY PRODUCTS, 1991

Item	January 1	March 31	June 30	September 30	December 31
-----Thousand pounds-----					
Blocks:					
Cod.....	10,018	5,366	11,484	9,055	13,413
Flounder.....	1,622	1,132	542	786	734
Greenland turbot.....	149	107	79	134	81
Haddock.....	2,400	1,243	1,600	2,355	1,466
Ocean perch.....	1,014	584	484	482	431
Pollock: Alaska.....	11,321	6,520	4,660	12,803	14,343
Saithe and other....	1,614	1,659	1,736	5,544	9,792
Whiting.....	2,298	2,282	5,141	8,958	6,338
Minced (grated) all species...	10,028	4,158	5,637	9,791	16,144
Unclassified.....	3,852	2,365	1,829	1,326	1,221
Total blocks.....	44,316	25,416	33,192	51,234	63,963
Fillets and steaks:					
Cod.....	9,309	10,203	25,536	23,435	22,121
Flounder.....	10,777	5,439	5,176	7,240	7,582
Greenland turbot.....	504	774	452	779	1,317
Haddock.....	1,261	684	1,578	2,378	2,790
Halibut.....	1,883	1,045	924	957	835
Ocean perch.....	5,032	2,691	3,265	2,499	3,452
Pollock.....	13,299	10,858	11,045	19,394	16,298
Whiting.....	4,527	3,054	2,695	2,585	3,602
Unclassified.....	15,426	13,952	12,097	16,948	19,320
Total fillets and steaks...	62,018	48,700	62,768	76,215	77,317
Fish sticks and portions (cooked uncooked, all species).	28,166	19,955	27,067	21,791	26,602
Round, dressed, etc.:					
Catfish.....	9,479	9,382	8,413	9,031	9,891
Halibut.....	7,240	1,758	8,510	18,226	16,616
Rainbow trout.....	785	1,178	1,307	1,298	1,408
Salmon.....	32,868	17,999	8,832	48,514	39,702
Whiting.....	258	809	1,157	966	998
Unclassified.....	30,509	28,295	27,747	28,189	28,322
Surimi and analog products....	24,216	26,763	22,814	25,493	19,780
Crabs:					
King.....	2,092	2,081	2,064	1,448	2,233
Snow.....	9,176	10,090	20,468	17,336	11,414
Unclassified.....	3,208	2,815	4,800	4,645	2,438
Lobsters (spiny and other).....	2,631	2,265	4,507	2,878	3,695
Scallops.....	3,161	3,395	4,401	6,830	2,380
Shrimp:					
Raw, headless.....	27,223	16,581	20,954	21,219	23,196
Breaded.....	6,005	6,052	5,595	5,815	6,952
Peeled.....	14,532	10,856	14,439	16,185	15,940
Unclassified.....	11,845	10,102	7,208	8,636	9,865
Total shrimp.....	59,605	43,591	48,196	51,855	55,953
Squid.....	14,134	10,660	7,321	3,693	8,356
Other shellfish.....	11,992	11,326	14,146	10,183	7,265
Bait and animal food.....	10,729	11,291	10,290	11,913	9,974
Total fish and shellfish...	342,449	267,109	310,679	388,045	379,951

Note:--Holdings of frozen fishery products include domestic and imported fish and shellfish.

Source:--Frozen Fishery Products - Annual Summary, 1991, Current Fishery Statistics No. 9101 will provide additional information.

U.S. Imports of Edible Fishery Products, 1991 **(Total Imports \$5,671.9 million)**



FOREIGN TRADE

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IMPORTS

FISHERY PRODUCTS IMPORTS, BY PRINCIPAL ITEMS, 1990 AND 1991

Item	1990		1991	
	<u>Thousand pounds</u>	<u>Thousand dollars</u>	<u>Thousand pounds</u>	<u>Thousand dollars</u>
Edible fishery products:				
Fresh and frozen:				
Whole or eviscerated:				
Cod, cusk, haddock, hake, ocean perch and pollock.....	78,274	40,629	76,698	44,286
Flatfish.....	27,970	40,981	29,242	45,911
Salmon.....	104,322	252,880	107,203	242,979
Tuna:				
Albacore.....	150,158	145,758	142,045	125,299
Other (1).....	303,551	193,542	353,501	215,903
Other.....	236,260	239,080	232,428	244,298
Fillets and steaks:				
Flatfish.....	60,311	130,548	52,229	125,374
Groundfish.....	200,980	351,912	202,409	400,624
Other.....	197,122	327,471	185,380	332,906
Blocks and slabs.....	264,468	373,292	290,485	443,922
Shrimp.....	491,613	1,639,181	530,230	1,836,002
Crabmeat.....	10,822	46,978	9,244	41,724
Lobster:				
American.....	44,672	168,052	39,121	146,463
Spiny.....	29,418	271,920	27,152	273,515
Scallops (meats).....	39,839	130,453	29,528	110,633
Other fish and shellfish.....	96,192	168,630	111,858	229,129
Canned:				
Anchovy.....	5,736	19,410	6,702	24,369
Herring.....	3,373	2,829	3,325	2,809
Mackerel.....	18,940	8,014	19,200	8,039
Salmon.....	1,378	4,241	983	2,582
Sardines:				
In oil.....	18,660	27,304	16,570	28,612
Not in oil.....	38,303	27,885	31,945	24,882
Tuna.....	284,593	293,873	351,744	358,889
Clams.....	13,858	11,117	10,421	9,779
Crabmeat.....	8,563	23,799	11,385	34,235
Lobsters.....	165	933	1,340	11,993
Oysters.....	13,920	26,969	12,432	32,075
Shrimp.....	9,735	19,510	9,361	20,665
Balls, cakes, and puddings.....	9,773	14,020	8,470	13,570
Other fish and shellfish.....	31,262	62,720	29,415	69,156
Cured:				
Dried.....	16,058	39,399	15,212	44,599
Pickled or salted.....	44,601	49,347	44,857	56,369
Smoked or kippered.....	9,974	29,835	8,177	24,615
Caviar and roe.....	2,504	15,007	2,643	14,873
Prepared meals.....	11,122	18,895	5,734	10,832
Other fish and shellfish.....	6,106	16,753	6,150	19,976
Total edible fishery products.	2,884,596	5,233,167	3,014,819	5,671,887
Nonedible fishery products:				
Meal and scrap.....	239,426	38,643	158,916	31,729
Fish oils.....	36,702	10,209	21,828	10,675
Other.....	-	3,765,661	-	3,720,769
Total nonedible fishery products.....	-	3,814,513	-	3,763,173
Grand total.....	-	9,047,680	-	9,435,060

(1) Includes loins and discs.

Note:--Data include imports into the United States and Puerto Rico and landings of tuna by foreign vessels at American Samoa. Statistics on imports are the weight of individual products as exported, i.e., fillets, steaks, whole, headed, etc.

Source:--U.S. Department of Commerce, Bureau of the Census.

FOREIGN TRADE

IMPORTS

EDIBLE AND NONEDIBLE FISHERY PRODUCTS IMPORTS, 1982-91

Year	Edible		Nonedible	Total
	<u>Thousand pounds</u>	<u>- - - - - Thousand dollars - - - - -</u>		
1982.....	2,225,048	3,202,408	1,321,170	4,523,578
1983.....	2,386,771	3,626,704	1,502,668	5,129,372
1984.....	2,454,287	3,742,333	2,141,060	5,883,393
1985.....	2,754,018	4,064,334	2,614,252	6,678,586
1986.....	2,978,905	4,813,488	2,812,805	7,626,293
1987.....	3,201,132	*5,711,233	3,106,464	8,817,697
1988.....	2,967,786	5,441,628	3,430,369	8,871,997
1989.....	*3,243,017	5,497,849	*4,106,507	*9,604,356
1990.....	2,884,596	5,233,167	3,814,513	9,047,680
1991.....	3,014,819	5,671,887	3,763,173	9,435,060

*Record. Source:--U.S. Department of Commerce, Bureau of the Census.

FISHERY PRODUCTS IMPORTS: VALUE, DUTIES COLLECTED,
AND AD VALOREM EQUIVALENT, 1982-91

Year	Value		Duties collected		Average ad valorem equivalent	
	Fishery imports	All imports	Fishery imports	All imports	Fishery imports	All imports
	- - - - - Thousand dollars - - - - -				Percent	
1982.....	4,523,578	243,951,900	111,952	8,687,452	2.5	3.6
1983.....	5,129,372	256,679,524	116,503	9,430,004	2.3	3.7
1984.....	5,883,393	322,989,519	145,689	12,042,152	2.5	3.7
1985.....	6,678,586	343,553,150	191,421	13,066,970	2.9	3.8
1986.....	7,626,293	368,656,594	187,791	13,312,112	2.5	3.6
1987.....	8,817,697	402,066,002	178,861	13,922,567	2.0	3.5
1988.....	8,871,995	437,140,185	206,470	15,054,304	2.3	3.4
1989.....	9,604,356	472,976,600	235,851	16,096,400	2.5	3.4
1990.....	9,047,680	490,553,800	213,710	16,338,700	2.4	3.3
1991.....	9,435,060	483,027,900	204,694	16,197,300	2.2	3.4

Source:--U.S. Department of Commerce, Bureau of the Census.

FOREIGN TRADE

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IMPORTS

EDIBLE AND NONEDIBLE FISHERY PRODUCTS IMPORTS, 1991

Continent and Country	Edible		Nonedible	Total
	<u>Thousand pounds</u>	<u>-----Thousand dollars-----</u>		
North America:				
Canada.....	668,171	1,229,446	305,448	1,534,894
Mexico.....	78,396	290,809	60,580	351,389
Honduras.....	21,647	88,085	46	88,131
Panama.....	32,438	68,418	2,297	70,715
Dominican Republic.....	534	2,527	43,473	46,000
Other.....	52,832	163,433	11,272	174,705
Total.....	854,018	1,842,718	423,116	2,265,834
South America:				
Ecuador.....	161,757	411,123	880	412,003
Chile.....	75,726	129,365	20,959	150,324
Brazil.....	23,429	90,654	37,385	128,039
Peru.....	19,591	28,909	43,064	71,973
Colombia.....	16,278	54,349	10,244	64,593
Other.....	111,126	139,940	28,238	168,178
Total.....	407,907	854,340	140,770	995,110
Europe:				
European Economic Community:				
Italy.....	1,046	1,639	1,019,646	1,021,285
France.....	55,137	22,616	295,114	317,730
Fed. Rep. of Germany	1,077	1,682	148,420	150,102
United Kingdom.....	6,005	19,354	93,687	113,041
Denmark.....	33,297	76,430	29,770	106,200
Other.....	86,078	81,576	117,697	199,273
Total.....	182,640	203,297	1,704,334	1,907,631
Other:				
Iceland.....	81,130	184,456	247	184,703
Norway.....	23,671	63,640	9,749	73,389
Switzerland.....	22	74	56,075	56,149
Faroe Is.....	12,175	30,081	-	30,081
USSR.....	8,349	15,876	9,147	25,023
Other.....	27,946	21,868	60,095	81,963
Total.....	153,293	315,995	135,313	451,308
Asia:				
Thailand.....	480,034	841,276	282,909	1,124,185
Japan.....	74,406	131,762	213,320	345,082
Hong Kong.....	8,535	14,583	316,328	330,911
China.....	121,597	283,647	39,204	322,851
Republic of Korea.....	76,455	132,037	61,626	193,663
Other.....	498,748	739,644	402,621	1,142,265
Total.....	1,259,775	2,142,949	1,316,008	3,458,957
Australia and Oceania:				
New Zealand.....	72,392	149,303	4,749	154,052
Australia.....	19,848	111,891	9,571	121,462
French Polynesia.....	25	77	9,500	9,577
Fiji.....	1,080	2,253	238	2,491
Vanuatu.....	5,014	1,660	-	1,660
Other.....	662	2,314	868	3,182
Total.....	99,021	267,498	24,926	292,424
Africa:				
Morocco.....	5,842	14,218	6,252	20,470
Ghana.....	42,374	16,981	2	16,983
Botswana.....	-	-	7,389	7,389
Nigeria.....	2,908	5,274	401	5,675
Mauritius.....	2,571	2,114	445	2,559
Other.....	4,470	6,503	4,217	10,720
Total.....	58,165	45,090	18,706	63,796
Grand total.....	3,014,819	5,671,887	3,763,173	9,435,060

Source:--U.S. Department of Commerce, Bureau of the Census.

FOREIGN TRADE

IMPORTS

REGULAR AND MINCED FISH BLOCKS AND SLABS IMPORTS,
BY SPECIES AND TYPE, 1990 AND 1991

Species and type	1990		1991	
	<u>Thousand pounds</u>	<u>Thousand dollars</u>	<u>Thousand pounds</u>	<u>Thousand dollars</u>
Regular blocks and slabs:				
Cod.....	125,179	238,274	110,797	242,629
Flatfish.....	7,538	11,257	4,694	8,568
Haddock.....	13,832	31,705	8,631	21,344
Ocean Perch.....	1,532	1,933	1,340	1,535
Pollock.....	48,201	33,313	69,068	77,272
Whiting.....	28,278	19,648	28,214	26,294
Other.....	8,543	15,105	15,563	25,693
Total.....	233,103	351,235	238,307	403,335
Minced blocks and slabs.....	31,365	22,057	52,178	40,587
Grand total.....	264,468	373,292	290,485	443,922

Source:--U.S. Department of Commerce, Bureau of the Census.

REGULAR AND MINCED FISH BLOCKS AND SLABS IMPORTS,
BY COUNTRY OF ORIGIN, 1990 AND 1991

Country	1990		1991	
	<u>Thousand pounds</u>	<u>Thousand dollars</u>	<u>Thousand pounds</u>	<u>Thousand dollars</u>
Canada.....	115,864	187,054	94,439	164,767
Denmark.....	30,142	61,942	31,612	71,779
Iceland.....	16,119	25,770	21,092	34,937
Republic of Korea.....	23,540	21,517	24,643	31,762
China.....	5,593	4,335	19,066	20,689
Argentina.....	17,701	12,713	15,646	14,698
Poland.....	23,084	12,804	16,563	13,602
Norway.....	4,994	12,020	5,571	12,924
Japan.....	4,496	9,417	10,833	12,354
Other.....	22,935	25,720	51,020	66,410
Total.....	264,468	373,292	290,485	443,922

Source:--U.S. Department of Commerce, Bureau of the Census.

GROUND FISH FILLET AND STEAK IMPORTS, BY SPECIES, 1990 AND 1991 (1)

Species	1990		1991	
	<u>Thousand pounds</u>	<u>Thousand dollars</u>	<u>Thousand pounds</u>	<u>Thousand dollars</u>
Cod.....	114,042	223,227	95,585	230,436
Haddock (2).....	39,098	69,076	53,825	104,520
Ocean Perch.....	47,840	59,609	52,999	65,668
Total.....	200,980	351,912	202,409	400,624

(1) Does not include data on fish blocks and slabs.

(2) Includes some quantities of cusk, hake, and pollock fillets.

Note:--Imports and Exports of Fishery Products Annual Summary, 1991, Current Fishery Statistics No. 9102 will provide additional information.

Source:--U.S. Department of Commerce, Bureau of the Census.

FOREIGN TRADE

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IMPORTS

CANNED TUNA NOT IN OIL, QUOTA AND IMPORTS, 1982-91

Year	Quota (1)	Imports		
		Under quota (2)	Over quota (3)	Total
	-----Thousand pounds-----			
1982.....	109,742	92,759	-	92,759
1983.....	91,904	91,904	28,304	120,208
1984.....	95,587	95,587	68,328	163,915
1985.....	97,496	97,496	116,854	214,350
1986.....	81,092	81,092	153,057	234,149
1987.....	91,539	91,539	123,364	214,903
1988.....	85,185	85,185	193,784	278,969
1989.....	76,734	76,734	234,323	311,057
1990.....	87,158	87,158	171,472	258,630
1991.....	75,092	75,092	237,236	312,328

(1) Imports have been subject to tariff quotas since April 14, 1956, and are based on 20 percent of the previous year's domestic pack, excluding the pack in American Samoa.

(2) Dutiable in 1956 to 1967 at 12.5 percent ad valorem; 1968, 11 percent; 1969, 10 percent; 1970, 8.5 percent; 1971, 7 percent; and 1972 to 1991, 6 percent.

(3) Dutiable in 1972 to 1991, 12.5 percent.

Note:--Data in this table will not agree with tuna import data released by the U.S. Department of Commerce, Bureau of the Census. Any tuna entered for consumption or withdrawn from a warehouse for consumption during the calendar year, except for receipts from insular possessions of the U.S., is subject to this quota.

Source:--U.S. Department of the Treasury, U.S. Customs Service.

CANNED TUNA, BY COUNTRY OF ORIGIN, 1990 AND 1991

Country	1990		1991	
	Thousand pounds	Thousand dollars	Thousand pounds	Thousand dollars
Thailand.....	205,049	213,562	247,473	252,488
Indonesia.....	21,509	18,056	47,333	39,946
Taiwan.....	17,410	26,120	23,306	32,725
Philippines.....	27,045	22,018	21,949	18,698
Malaysia.....	2,938	3,613	4,188	6,764
Ecuador.....	3,395	2,989	2,609	2,253
Japan.....	1,408	2,587	919	1,667
Venezuela.....	1,022	920	1,753	1,584
Singapore.....	2,952	1,394	1,214	1,215
Other.....	1,865	2,614	1,000	1,549
Total.....	284,593	293,873	351,744	358,889

Source:--U.S. Department of Commerce, Bureau of the Census.

FOREIGN TRADE

IMPORTS

SHRIMP IMPORTS, BY COUNTRY OF ORIGIN, 1990 AND 1991

Country	1990		1991	
	<u>Thousand pounds</u>	<u>Thousand dollars</u>	<u>Thousand pounds</u>	<u>Thousand dollars</u>
North America:				
Mexico.....	37,029	177,118	36,701	181,923
Panama.....	11,723	41,108	13,065	47,243
Honduras.....	9,205	28,593	12,958	42,016
Guatemala.....	5,589	17,531	4,888	15,582
El Salvador.....	5,240	11,992	4,705	13,887
Canada.....	4,876	10,548	7,437	13,618
Costa Rica.....	1,233	4,239	1,511	6,959
Nicaragua.....	789	2,327	1,043	3,365
Greenland.....	273	1,040	349	1,347
Belize.....	125	581	298	1,135
Other.....	552	1,415	458	1,607
Total.....	76,634	296,492	83,413	328,682
South America:				
Ecuador.....	84,386	291,113	107,659	362,240
Colombia.....	8,104	31,199	10,078	36,627
Venezuela.....	7,692	24,995	7,637	27,198
Brazil.....	8,729	21,374	8,275	23,656
Peru.....	4,748	16,705	4,754	16,855
Guyana.....	4,644	12,152	6,199	16,309
Chile.....	993	3,050	623	2,321
Suriname.....	461	1,199	242	491
French Guiana.....	671	2,365	-	-
Argentina.....	69	285	-	-
Other.....	-	-	-	-
Total.....	120,497	404,437	145,467	485,697
Europe:				
European Economic Community:				
Denmark.....	159	616	147	476
Netherlands.....	41	154	149	355
Greece.....	26	21	37	176
Belgium.....	38	97	42	120
Spain.....	10	108	14	88
Other.....	475	1,593	3	24
Total.....	749	2,589	392	1,239
Other:				
Iceland.....	378	2,298	1,120	5,518
Norway.....	2,233	6,919	1,145	3,666
Faroe Islands.....	174	530	327	934
USSR.....	983	379	39	120
Poland.....	-	-	37	29
Other.....	648	1,887	2	13
Total.....	4,416	12,013	2,670	10,280
Asia:				
Thailand.....	55,896	249,612	100,268	432,492
China.....	126,637	355,110	77,413	219,640
Indonesia.....	18,952	75,216	25,458	105,823
India.....	31,332	56,572	38,610	67,445
Philippines.....	10,386	42,491	14,170	57,978
Bangladesh.....	14,733	56,187	10,776	36,563
Singapore.....	6,811	30,357	7,990	26,580
Malaysia.....	7,522	18,216	7,770	21,221
Pakistan.....	12,206	21,075	11,654	16,642
Taiwan.....	3,513	10,711	3,122	13,075
Other.....	7,380	21,076	6,014	20,429
Total.....	295,368	936,623	303,245	1,017,888
Australia and Oceania.....	51	438	1,364	7,203
Africa.....	3,633	6,099	3,040	5,678
Grand total.....	501,348	1,658,691	539,591	1,856,667

Note:--Statistics on imports are the weights of the individual products as exported, i.e., raw headless, peeled, etc.

Source:--U.S. Department of Commerce, Bureau of the Census.

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IMPORTS

SHRIMP IMPORTS, BY TYPE OF PRODUCT, 1990 AND 1991

Type of product	1990		1991	
	<u>Thousand pounds</u>	<u>Thousand dollars</u>	<u>Thousand pounds</u>	<u>Thousand dollars</u>
Shell-on (heads off)	327,122	1,154,040	313,496	1,169,268
Peeled:				
Canned.....	9,735	19,510	9,361	20,665
Not breaded:				
Raw.....	148,605	400,882	198,568	577,971
Other.....	15,564	83,661	16,993	85,217
Breaded.....	322	598	1,173	3,546
Total.....	501,348	1,658,691	539,591	1,856,667

Source:--U.S. Department of Commerce, Bureau of the Census.



FISH MEAL AND SCRAP IMPORTS, BY COUNTRY OF ORIGIN, 1990 AND 1991

Country	1990		1991	
	<u>Thousand pounds</u>	<u>Thousand dollars</u>	<u>Thousand pounds</u>	<u>Thousand dollars</u>
Canada.....	41,826	11,522	48,204	13,943
Peru.....	141,705	18,805	54,332	8,834
Chile.....	31,876	5,158	40,836	7,089
Panama.....	21,601	2,126	14,398	1,294
Denmark.....	-	-	313	203
Sweden.....	-	-	304	135
Norway.....	1,142	678	165	110
Argentina.....	243	65	324	82
Taiwan.....	42	40	13	18
Other.....	991	249	27	21
Total.....	239,426	38,643	158,916	31,729

Source:--U.S. Department of Commerce, Bureau of the Census.

U.S. Exports of Edible Fishery Products, 1991 **(Total Exports \$3,037.1 million)**



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EXPORTS

DOMESTIC FISHERY PRODUCTS EXPORTS, BY PRINCIPAL ITEMS, 1990 AND 1991

Item	1990		1991	
	<u>Thousand pounds</u>	<u>Thousand dollars</u>	<u>Thousand pounds</u>	<u>Thousand dollars</u>
Edible fishery products:				
Fresh and frozen:				
Whole or eviscerated:				
Cod, haddock, hake, and pollock.....	188,800	143,262	222,083	187,698
Flatfish.....	76,191	82,807	174,011	136,600
Herring.....	94,645	59,190	92,900	62,624
Sablefish.....	43,457	72,586	41,561	97,911
Salmon.....	307,711	666,583	255,515	436,975
Tuna.....	19,773	45,085	17,081	39,818
Other.....	319,448	204,079	256,175	161,787
Fillets, and steaks:				
Cod.....	6,384	8,470	8,274	10,485
Salmon.....	2,599	5,801	-	-
Other.....	36,990	52,049	58,250	76,381
Blocks and slabs.....	272,019	214,679	260,057	345,765
Fish sticks and like products...	80,660	63,820	40,419	49,750
Clams.....	1,490	2,117	2,385	3,923
Crabs.....	107,543	351,790	179,150	424,018
Crabmeat.....	4,065	10,294	2,326	5,717
Lobsters.....	17,156	73,360	22,835	93,005
Scallops (meats).....	6,312	19,518	6,274	21,328
Sea urchins.....	13,810	65,622	6,332	12,601
Shrimp.....	29,176	112,212	25,719	102,304
Squid.....	44,756	28,534	40,549	27,231
Other fish and shellfish.....	17,570	38,782	15,764	35,016
Canned:				
Salmon.....	49,400	104,277	66,019	133,644
Sardines.....	8,977	9,155	10,434	9,394
Tuna.....	8,646	13,211	10,033	15,744
Abalone.....	1,739	31,022	1,969	35,510
Crabmeat.....	373	1,153	520	965
Shrimp.....	2,463	6,523	2,132	6,441
Squid.....	9,718	5,001	10,825	5,301
Other fish and shellfish.....	17,006	15,286	46,440	61,874
Cured:				
Dried.....	3,801	11,693	3,320	14,026
Pickled or salted.....	14,612	18,728	19,295	28,869
Smoked or kippered.....	631	2,567	573	2,017
Caviar and roe:				
Herring.....	12,628	21,779	18,845	22,522
Salmon.....	16,969	80,189	16,378	69,738
Other.....	40,796	121,868	63,759	284,170
Prepared meals.....	818	1,309	2,815	3,444
Other fish and shellfish.....	31,189	12,998	19,193	12,553
Total edible fishery products.	1,910,321	2,777,399	2,020,210	3,037,149
Nonedible fishery products:				
Meal and scrap.....	137,728	40,552	205,039	59,244
Fish oils.....	222,341	23,887	254,063	34,591
Other.....	-	2,797,237	-	3,030,847
Total nonedible fishery products.....	-	2,861,676	-	3,124,682
Grand total.....	-	5,639,075	-	6,161,831

Note:--Does not include U.S.-flag vessel catches transferred onto foreign vessels in the U.S.
EEZ joint venture operations.

Source:--U.S. Department of Commerce, Bureau of the Census.

FOREIGN TRADE

EXPORTS

DOMESTIC FISHERY PRODUCTS EXPORTS, 1982-91

Year	Edible		Nonedible	Total
	<u>Thousand pounds</u>	<u>- - - - -Thousand dollars- - - - -</u>		
1982.....	657,246	998,873	60,011	1,058,884
1983.....	601,913	907,688	113,804	1,021,492
1984.....	574,124	842,349	106,490	948,839
1985.....	648,146	1,010,268	73,846	1,084,114
1986.....	735,026	1,289,807	66,289	1,356,096
1987.....	782,935	1,577,607	82,764	1,660,371
1988.....	1,060,804	2,155,628	118,967	2,274,595
1989.....	1,374,012	2,282,994	2,423,848	4,706,842
1990.....	1,910,321	2,777,399	2,861,676	5,639,075
1991.....	*2,020,210	*3,037,149	*3,124,682	*6,161,831

*Record. Source:--U.S. Department of Commerce, Bureau of the Census.

NOTE:--The increase in the nonedible value beginning in 1989 is due to re-examination of commodities that are considered to be based on fishery products including fish, shellfish, aquatic plants and animals and any products thereof, including processed and manufactured products.

Source:--U.S. Department of Commerce, Bureau of the Census.



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EXPORTS

EDIBLE AND NONEDIBLE FISHERY PRODUCTS EXPORTS, 1991

Continent and Country	Edible		Nonedible	Total
	<u>Thousand pounds</u>		<u>Thousand dollars</u>	
North America:				
Canada.....	173,682	323,835	684,046	1,007,881
Mexico.....	10,286	17,887	183,520	201,407
Dominican Republic....	428	689	46,407	47,096
Panama.....	1,415	1,823	28,443	30,266
Bahamas.....	671	1,673	20,944	22,617
Other.....	13,024	16,394	90,214	106,608
Total.....	199,506	362,301	1,053,574	1,415,875
South America:				
Venezuela.....	4,318	3,413	28,607	32,020
Brazil.....	95	456	28,191	28,647
Bolivia.....	-	-	21,595	21,595
Argentina.....	257	692	17,512	18,204
Chile.....	47	214	17,300	17,514
Other.....	674	802	46,063	46,865
Total.....	5,391	5,577	159,268	164,845
Europe:				
European Economic Community:				
United Kingdom.....	80,324	137,188	131,059	268,247
France.....	56,974	97,331	73,129	170,460
Fed. Rep of Germany	56,476	60,237	86,732	146,969
Netherlands.....	11,739	18,366	114,026	132,392
Italy.....	16,218	35,469	60,607	96,076
Other.....	78,606	92,359	122,575	214,934
Total.....	300,337	440,950	588,128	1,029,078
Other:				
Switzerland.....	1,546	4,319	117,536	121,855
USSR.....	79,748	3,933	50,518	54,451
Norway.....	44,689	37,966	10,708	48,674
Sweden.....	10,200	17,330	10,069	27,399
Austria.....	16	64	4,892	4,956
Other.....	8,551	4,690	13,176	17,866
Total.....	144,750	68,302	206,899	275,201
Asia:				
Japan.....	1,124,183	1,869,316	460,810	2,330,126
Republic of Korea.....	170,982	158,247	104,943	263,190
Hong Kong.....	5,566	32,617	123,151	155,768
Taiwan.....	10,572	39,356	79,862	119,218
Singapore.....	1,331	3,317	61,093	64,410
Other.....	39,878	37,115	200,470	237,585
Total.....	1,352,512	2,139,968	1,030,329	3,170,297
Australia and Oceania:				
Australia.....	8,998	15,356	51,148	66,504
New Zealand.....	431	686	8,118	8,804
French Polynesia.....	418	738	1,018	1,756
Fiji.....	4,769	1,076	640	1,716
Fed Sts. of Micronesia	386	194	769	963
Other.....	465	248	760	1,008
Total.....	15,467	18,298	62,453	80,751
Africa:				
Rep. of South Africa..	1,091	1,218	8,804	10,022
Nigeria.....	-	-	5,199	5,199
Egypt.....	517	125	2,755	2,880
Algeria.....	-	-	1,588	1,588
Angola.....	39	127	1,213	1,340
Other.....	600	283	4,472	4,755
Total.....	2,247	1,753	24,031	25,784
Grand total.....	2,020,210	3,037,149	3,124,682	6,161,831

Source:--U.S. Department of Commerce, Bureau of the Census.

FOREIGN TRADE

EXPORTS

DOMESTIC AND FOREIGN SHRIMP PRODUCTS EXPORTS, 1990 AND 1991

Item	1990		1991	
	<u>Thousand pounds</u>	<u>Thousand dollars</u>	<u>Thousand pounds</u>	<u>Thousand dollars</u>
Fresh and frozen:				
Domestic.....	29,176	112,212	25,719	102,304
Foreign.....	12,238	49,197	13,988	54,808
Total.....	41,414	161,409	39,707	157,112
Canned:				
Domestic.....	2,463	6,523	2,132	6,441
Foreign.....	207	434	220	522
Total.....	2,670	6,957	2,352	6,963
Total:				
Domestic.....	31,639	118,735	27,851	108,745
Foreign.....	12,445	49,631	14,208	55,330
Total.....	44,084	168,366	42,059	164,075

Source:--U.S. Department of Commerce, Bureau of the Census.

DOMESTIC FRESH AND FROZEN SHRIMP EXPORTS,
BY COUNTRY OF DESTINATION, 1990 AND 1991

Country	1990		1991	
	<u>Thousand pounds</u>	<u>Thousand dollars</u>	<u>Thousand pounds</u>	<u>Thousand dollars</u>
Canada.....	21,506	85,265	18,163	75,454
Mexico.....	1,722	4,247	2,610	8,151
Japan.....	2,507	9,894	787	3,106
United Kingdom.....	529	1,812	595	2,165
Norway.....	245	768	483	1,930
Honduras.....	216	789	469	1,905
Bermuda.....	313	1,566	288	1,385
Thailand.....	175	702	264	976
Netherlands.....	157	859	171	656
Other.....	1,806	6,310	1,889	6,576
Total.....	29,176	112,212	25,719	102,304

Source:--U.S. Department of Commerce, Bureau of the Census.

DOMESTIC CANNED SHRIMP EXPORTS,
BY COUNTRY OF DESTINATION, 1990 AND 1991

Country	1990		1991	
	<u>Thousand pounds</u>	<u>Thousand dollars</u>	<u>Thousand pounds</u>	<u>Thousand dollars</u>
Canada.....	1,562	4,789	1,312	3,932
China.....	-	-	181	624
Hong Kong.....	27	124	186	496
Switzerland.....	22	100	68	341
Mexico.....	158	297	75	249
Greece.....	108	143	124	246
Philippines.....	-	-	80	201
Thailand.....	287	263	20	116
Federal Republic of Germany.....	53	196	33	107
Other.....	246	611	53	129
Total.....	2,463	6,523	2,132	6,441

Source:--U.S. Department of Commerce, Bureau of the Census.

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EXPORTS

DOMESTIC FRESH AND FROZEN SALMON EXPORTS, WHOLE OR EVISCERATED, BY COUNTRY OF DESTINATION, 1990 AND 1991

Country	1990		1991	
	<u>Thousand pounds</u>	<u>Thousand dollars</u>	<u>Thousand pounds</u>	<u>Thousand dollars</u>
Japan.....	244,393	561,703	202,045	353,086
France.....	18,655	32,319	17,590	26,457
Canada.....	17,236	29,021	13,241	24,742
United Kingdom.....	9,772	16,617	5,967	8,368
Sweden.....	4,170	5,119	4,555	5,161
Denmark.....	2,215	2,983	3,353	4,053
Belgium.....	1,582	3,522	1,414	2,978
Republic of Korea.....	1,135	2,007	1,280	2,518
Federal Republic of Germany.....	1,406	2,433	1,157	1,840
Other.....	7,147	10,859	4,913	7,772
Total.....	307,711	666,583	255,515	436,975

Source:--U.S. Department of Commerce, Bureau of the Census.

DOMESTIC FRESH AND FROZEN SALMON EXPORTS, FILLETS, STEAKS OR PORTIONS, BY COUNTRY OF DESTINATION, 1990 AND 1991

Country	1990		1991	
	<u>Thousand pounds</u>	<u>Thousand dollars</u>	<u>Thousand pounds</u>	<u>Thousand dollars</u>
Japan.....	986	2,641	-	-
France.....	624	1,155	-	-
Republic of Korea.....	267	659	-	-
Denmark.....	296	464	-	-
Federal Republic of Germany.....	148	300	-	-
Hong Kong.....	120	222	-	-
Switzerland.....	45	82	-	-
Sweden.....	31	70	-	-
Netherlands.....	27	69	-	-
Other.....	55	139	-	-
Total.....	2,599	5,801	-	-

Source:--U.S. Department of Commerce, Bureau of the Census.

DOMESTIC CANNED SALMON EXPORTS, BY COUNTRY OF DESTINATION, 1990 AND 1991

Country	1990		1991	
	<u>Thousand pounds</u>	<u>Thousand dollars</u>	<u>Thousand pounds</u>	<u>Thousand dollars</u>
United Kingdom.....	27,678	61,096	43,162	92,864
Australia.....	6,233	13,713	6,777	13,483
Netherlands.....	6,214	10,883	5,995	9,910
Canada.....	6,348	13,694	4,374	9,070
USSR.....	-	-	1,627	2,016
Belgium.....	1,322	2,115	888	1,456
Ireland.....	647	1,062	740	1,105
France.....	301	434	931	1,008
New Zealand.....	30	76	340	547
Other.....	627	1,204	1,185	2,185
Total.....	49,400	104,277	66,019	133,644

Source:--U.S. Department of Commerce, Bureau of the Census.

FOREIGN TRADE

EXPORTS

DOMESTIC FRESH AND FROZEN CRAB EXPORTS,
BY COUNTRY OF DESTINATION, 1990 AND 1991

Country	1990		1991	
	<u>Thousand pounds</u>	<u>Thousand dollars</u>	<u>Thousand pounds</u>	<u>Thousand dollars</u>
Japan.....	102,374	335,575	165,355	393,226
Canada.....	2,923	11,119	3,372	11,419
China.....	-	-	5,912	10,563
Republic of Korea.....	1,426	2,508	1,899	3,357
Thailand.....	243	499	1,553	2,877
Hong Kong.....	84	250	670	1,313
France.....	101	361	66	259
Italy.....	31	117	20	253
Federal Republic of Germany.....	42	173	40	191
Other.....	319	1,188	263	560
Total.....	107,543	351,790	179,150	424,018

Source:--U.S. Department of Commerce, Bureau of the Census.

DOMESTIC FRESH AND FROZEN CRABMEAT EXPORTS,
BY COUNTRY OF DESTINATION, 1990 AND 1991

Country	1990		1991	
	<u>Thousand pounds</u>	<u>Thousand dollars</u>	<u>Thousand pounds</u>	<u>Thousand dollars</u>
Japan.....	2,346	6,288	1,012	3,514
Canada.....	121	290	207	539
Italy.....	3	14	128	237
United Kingdom.....	14	56	109	137
Portugal.....	-	-	49	136
France.....	46	57	148	133
Belgium.....	-	-	110	126
China.....	88	167	34	100
Bermuda.....	3	15	24	95
Other.....	1,444	3,407	505	700
Total.....	4,065	10,294	2,326	5,717

Source:--U.S. Department of Commerce, Bureau of the Census.

DOMESTIC FRESH AND FROZEN HERRING EXPORTS, WHOLE OR EVISCERATED,
BY COUNTRY OF DESTINATION, 1990 AND 1991

Country	1990		1991	
	<u>Thousand pounds</u>	<u>Thousand dollars</u>	<u>Thousand pounds</u>	<u>Thousand dollars</u>
Japan.....	66,014	50,746	70,592	55,453
Canada.....	6,027	3,383	6,532	2,941
Republic of Korea.....	8,541	4,300	5,179	2,846
China.....	-	-	641	507
USSR.....	13,789	589	9,364	465
Thailand.....	222	141	376	252
Australia.....	-	-	95	77
Other.....	52	31	121	83
Total.....	94,645	59,190	92,900	62,624

Source:--U.S. Department of Commerce, Bureau of the Census.

FOREIGN TRADE

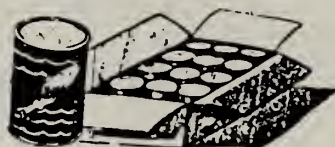
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EXPORTS

DOMESTIC FISH AND MARINE ANIMAL OIL EXPORTS, BY COUNTRY OF DESTINATION, 1990 AND 1991

Country	1990		1991	
	<u>Thousand pounds</u>	<u>Thousand dollars</u>	<u>Thousand pounds</u>	<u>Thousand dollars</u>
Netherlands.....	176,622	16,196	187,039	22,818
Mexico.....	16,692	3,044	23,318	3,565
United Kingdom.....	6	36	17,610	2,235
Republic of Korea.....	1,316	1,234	1,446	1,998
Norway.....	35	5	16,254	1,962
Canada.....	626	224	2,805	902
Spain.....	5,548	585	2,878	398
Japan.....	55	64	654	152
Ecuador.....	1,100	147	1,099	128
Other.....	20,341	2,352	960	433
Total.....	222,341	23,887	254,063	34,591

Source:--U.S. Department of Commerce, Bureau of the Census.



DOMESTIC FISH MEAL EXPORTS, BY COUNTRY OF DESTINATION, 1990 AND 1991

Country	1990		1991	
	<u>Thousand pounds</u>	<u>Thousand dollars</u>	<u>Thousand pounds</u>	<u>Thousand dollars</u>
Taiwan.....	74,579	21,967	67,937	18,246
Japan.....	17,593	3,732	65,296	13,176
Canada.....	13,316	3,015	25,457	6,711
Thailand.....	1,116	2,416	805	4,022
Republic of Korea.....	1,556	524	6,396	4,018
Hong Kong.....	1,268	395	13,768	3,762
Philippines.....	1,567	397	7,443	1,875
Indonesia.....	3,805	1,653	2,467	1,856
Mexico.....	3,840	822	3,477	1,782
Other.....	19,088	5,631	11,993	3,796
Total.....	137,728	40,552	205,039	59,244

Source:--U.S. Department of Commerce, Bureau of the Census.

SUPPLY OF FISHERY PRODUCTS

U.S. SUPPLY OF EDIBLE AND INDUSTRIAL COMMERCIAL FISHERY PRODUCTS, 1982-91
(Round weight)

Year	Domestic commercial landings (1)		Imports (2)		Total
	<u>Million pounds</u>	<u>Percent</u>	<u>Million pounds</u>	<u>Percent</u>	<u>Million pounds</u>
1982.....	6,367	53.0	5,644	47.0	12,011
1983.....	6,439	52.1	5,913	47.9	12,352
1984.....	6,438	51.3	6,114	48.7	12,552
1985.....	6,258	41.3	8,892	58.7	15,150
1986.....	6,031	42.0	8,337	58.0	14,368
1987.....	6,896	43.8	8,848	56.2	15,744
1988.....	7,192	49.2	7,436	50.8	14,628
1989.....	8,463	54.7	7,022	45.3	15,485
1990.....	9,404	58.3	6,945	41.7	16,353
1991.....	*9,484	58.0	6,879	42.0	16,363

(1) Preliminary.

(2) Excludes imports of edible fishery products consumed in Puerto Rico, but includes landings of foreign-caught tuna in American Samoa.

*Record. Records--1968 imports: 13 billion lb; 1968 total: 17 billion lb.

Note:--The weights of U.S. landings and imports represent the round (live) weight of all items except univalve and bivalve mollusks (conchs, clams, oysters, scallops, etc.) which are shown in weight of meats (excluding the shell).

U.S. SUPPLY OF EDIBLE COMMERCIAL FISHERY PRODUCTS, 1982-91
(Round weight)

Year	Domestic commercial landings (1)		Imports (2)		Total
	<u>Million pounds</u>	<u>Percent</u>	<u>Million pounds</u>	<u>Percent</u>	<u>Million pounds</u>
1982.....	3,285	41.2	4,683	58.8	7,968
1983.....	3,238	38.5	5,175	61.5	8,413
1984.....	3,320	39.1	5,178	60.9	8,498
1985.....	3,294	35.3	6,043	64.7	9,337
1986.....	3,393	35.3	6,227	64.7	9,620
1987.....	3,946	37.4	*6,615	62.6	10,561
1988.....	4,588	43.7	5,917	56.3	10,505
1989.....	6,204	50.8	6,064	49.2	12,268
1990.....	*7,041	56.7	5,621	43.3	*12,662
1991.....	7,031	54.0	5,989	46.0	13,020

(1) Preliminary.

(2) Excludes imports of edible fishery products consumed in Puerto Rico, but includes landings of foreign-caught tuna in American Samoa. *Record.

U.S. SUPPLY OF INDUSTRIAL COMMERCIAL FISHERY PRODUCTS, 1982-91
(Round weight)

Year	Domestic commercial landings (1)		Imports		Total
	<u>Million pounds</u>	<u>Percent</u>	<u>Million pounds</u>	<u>Percent</u>	<u>Million pounds</u>
1982.....	3,082	76.2	961	23.8	4,043
1983.....	*3,201	81.3	738	18.7	3,939
1984.....	3,118	76.9	936	23.1	4,054
1985.....	2,964	51.0	2,849	49.0	5,813
1986.....	2,638	55.6	2,110	44.4	4,748
1987.....	2,950	56.9	2,233	43.1	5,183
1988.....	2,604	63.2	1,519	36.8	4,123
1989.....	2,259	70.2	958	29.8	3,217
1990.....	2,363	64.1	1,324	35.9	3,687
1991.....	2,453	73.4	890	26.6	3,343

(1) Preliminary. *Record. Records--1968 imports: 9 billion lb; 1968 total: 11 billion lb.

SUPPLY OF FISHERY PRODUCTS

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U.S. SUPPLY OF COMMERCIAL FINFISH AND SHELLFISH, 1990 AND 1991

Item	Domestic commercial landings		Imports (1)		Total	
	1990	1991	1990	1991	1990	1991
-----Million pounds, round weight-----						
Edible fishery products:						
Finfish.....	5,747	5,564	4,373	4,622	10,120	10,186
Shellfish.....	1,294	1,467	1,248	1,367	2,542	2,834
Total.....	7,041	7,031	5,621	5,989	12,662	13,020
Industrial fishery products:						
Finfish.....	2,344	2,429	(2) 1,324	(2) 890	3,667	3,320
Shellfish.....	19	24	(3)	(3)	19	24
Total.....	2,363	2,453	1,324	(2) 890	3,687	3,344
Total:						
Finfish.....	8,091	7,993	5,697	5,512	13,787	13,506
Shellfish.....	1,313	1,491	1,248	1,367	2,561	2,858
Total.....	9,404	9,484	6,945	6,879	16,349	16,364

See footnotes below.

VALUE OF U.S. SUPPLY OF COMMERCIAL FINFISH AND SHELLFISH, 1990 AND 1991

Item	Domestic commercial landings		Imports (1)		Total	
	1990	1991	1990	1991	1990	1991
-----Million dollars-----						
Edible fishery products:						
Finfish.....	1,755	1,553	2,697	2,890	4,452	4,443
Shellfish.....	1,611	1,616	2,536	2,782	4,147	4,398
Total.....	3,366	3,169	5,233	5,672	8,599	8,841
Industrial fishery products:						
Finfish.....	145	127	(2) 38	(2) 32	183	159
Shellfish.....	11	12	(3)	(3)	11	12
Total.....	156	139	38	(2) 32	194	171
Total:						
Finfish.....	1,900	1,680	2,735	2,922	4,635	4,602
Shellfish.....	1,622	1,628	2,536	2,782	4,158	4,410
Total.....	3,522	3,308	5,271	5,704	8,793	9,012

(1) Excludes imports of edible fishery products consumed in Puerto Rico, but includes landings of foreign-caught tuna in American Samoa.

(2) Includes only quantity and value of fish meal.

(3) Not available.

Note:--Value of domestic commercial landings is exvessel value.

SUPPLY OF FISHERY PRODUCTS

U.S. SUPPLY OF REGULAR AND MINCED BLOCKS, 1982-91
(Edible weight)

Year	U.S. production		Imports		Total supply
	Quantity	Percent of total supply	Quantity	Percent of total supply	Quantity
	<u>Thousand pounds</u>	<u>Percent</u>	<u>Thousand pounds</u>	<u>Percent</u>	<u>Thousand pounds</u>
1982.....	2,766	0.9	318,966	99.1	321,732
1983.....	5,155	1.3	384,458	98.7	389,613
1984.....	2,655	0.8	316,165	99.2	318,820
1985.....	2,551	0.8	334,060	99.2	336,611
1986.....	3,919	1.1	363,897	98.9	367,816
1987.....	13,559	3.3	403,577	96.7	417,136
1988.....	44,602	12.8	303,237	87.2	347,839
1989.....	30,898	9.8	283,278	90.2	314,176
1990.....	9,739	3.6	264,468	96.4	274,207
1991.....	22,103	7.1	290,485	92.9	312,588

U.S. SUPPLY OF ALL FILLETS AND STEAKS, 1982-91
(Edible weight)

Year	U.S. production (1)		Imports		Total supply
	Quantity	Percent of total supply	Quantity	Percent of total supply	Quantity
	<u>Thousand pounds</u>	<u>Percent</u>	<u>Thousand pounds</u>	<u>Percent</u>	<u>Thousand pounds</u>
1982.....	217,644	33.0	440,916	67.0	658,560
1983.....	230,649	34.4	439,716	65.6	670,365
1984.....	252,288	34.8	473,594	65.2	725,882
1985.....	245,525	31.4	536,725	68.6	782,250
1986.....	279,468	34.2	538,532	65.8	818,000
1987.....	356,081	36.4	620,985	63.6	977,066
1988.....	378,236	42.2	517,709	57.8	895,945
1989.....	371,082	41.8	517,620	58.2	888,702
1990.....	440,692	49.0	458,413	51.0	899,105
1991.....	402,352	47.8	440,018	52.2	842,370

(1) Includes fillets used to produce blocks.

U.S. SUPPLY OF GROUND FISH FILLETS AND STEAKS, 1982-91
(Edible weight)

Year	U.S. production (1)		Imports		Total supply
	Quantity	Percent of total supply	Quantity	Percent of total supply	Quantity
	<u>Thousand pounds</u>	<u>Percent</u>	<u>Thousand pounds</u>	<u>Percent</u>	<u>Thousand pounds</u>
1982.....	72,885	19.8	295,193	80.2	368,078
1983.....	82,656	21.7	298,170	78.3	380,826
1984.....	102,142	24.9	307,852	75.1	409,994
1985.....	93,292	23.4	305,690	76.6	398,982
1986.....	133,552	31.7	287,099	68.3	420,651
1987.....	199,743	38.8	315,418	61.2	515,161
1988.....	206,786	45.0	253,187	55.0	459,973
1989.....	211,498	44.4	265,001	55.6	476,499
1990.....	258,809	56.3	200,980	43.7	459,789
1991.....	276,645	57.7	202,409	42.3	479,054

(1) Includes fillets used to produce blocks. Species include: cod, cusk, haddock, hake, pollock, and ocean perch.

SUPPLY OF FISHERY PRODUCTS

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U.S. COMMERCIAL LANDINGS AND IMPORTS OF TUNA, 1982-91

(Thousand pounds)

Year	Domestic commercial landings			Imports		
	Atlantic, Gulf Pacific Coast States, and Hawaii	Puerto Rico and American Samoa (1)	Total	Fresh and frozen including cooked loins and discs (2)	Canned	
					In oil	Not in oil
	----- (Round weight) -----				---Product weight---	
1982.....	261,409	211,679	473,088	589,558	213	87,366
1983.....	278,692	307,298	585,990	533,686	197	122,132
1984.....	211,830	371,089	582,919	497,079	277	162,036
1985.....	83,054	433,083	516,137	482,742	303	213,645
1986.....	87,811	469,034	556,845	567,524	301	236,320
1987.....	100,058	526,186	626,244	578,883	329	211,356
1988.....	111,349	497,975	609,324	557,488	318	244,186
1989.....	89,413	452,050	541,463	664,302	422	347,790
1990.....	62,393	451,410	513,803	564,322	423	284,170
1991.....	35,695	484,168	519,863	629,846	344	*351,400

(1) Includes a quantity of fish landed at other ports by U.S.-flag vessels.

(2) Includes landings in American Samoa of foreign-caught fish.

*Record. Records--1976 domestic landings: 664,913,000 lb; 1978 imports: 870,259,000 lb.



U.S. SUPPLY OF CANNED TUNA, 1982-91

(Canned weight)

Year	Domestic production				Imported Canned		Total supply
	Albacore		Lightmeat				
	Thousand pounds	Percent	Thousand pounds	Percent	Thousand pounds	Percent	Thousand pounds
1982.....	125,113	20.0	413,390	66.0	87,579	14.0	626,082
1983.....	106,175	14.9	484,367	67.9	122,329	17.2	712,871
1984.....	136,745	17.6	477,536	61.5	162,313	20.9	776,594
1985.....	132,001	17.4	412,992	54.4	213,948	28.2	758,941
1986.....	157,341	18.0	479,490	54.9	236,621	27.1	873,452
1987.....	139,888	16.2	514,095	59.4	211,685	24.5	865,668
1988.....	131,114	15.6	467,067	55.4	244,504	29.0	842,685
1989.....	137,284	13.3	548,983	53.1	*348,212	33.6	*1,034,479
1990.....	131,879	15.2	448,722	51.9	284,593	32.9	865,194
1991.....	121,700	12.9	471,083	49.9	351,744	37.2	944,527

*Record. Record--1978 U.S.Pack: 704,793,000 lb.

SUPPLY OF FISHERY PRODUCTS

U.S. SUPPLY OF CANNED SARDINES, 1982-91
(Canned weight)

Year	U.S. pack	Imports			Total	Exports		Total supply
		In oil	Not in oil	Total		Domestic	Foreign	
-----Thousand pounds-----								
1982.....	18,003	14,119	35,925	50,044	68,047	1,049	195	66,803
1983.....	13,110	17,151	18,096	35,247	48,357	1,013	920	46,424
1984.....	14,650	17,535	27,216	44,751	59,401	889	860	57,652
1985.....	20,016	23,009	34,213	57,222	77,238	529	570	76,139
1986.....	15,601	22,949	30,315	53,264	68,865	271	287	68,307
1987.....	13,116	27,352	37,670	65,022	78,138	999	158	76,981
1988.....	18,611	22,813	30,546	53,359	71,970	8,555	162	63,253
1989.....	13,221	21,771	34,608	56,379	69,600	8,951	119	60,530
1990.....	13,240	18,660	38,303	56,963	70,203	8,977	71	61,155
1991.....	13,986	16,570	31,945	48,515	62,501	10,434	234	51,833

*Record--1974 imports: 69,137,000 lb.

U.S. SUPPLY OF CANNED SALMON, 1982-91
(Canned weight)

Year	U.S. pack	Imports	Total	Exports		Total supply
				Domestic	Foreign	
	-----Thousand pounds-----					
1982.....	112,100	158	112,258	41,156	111	70,991
1983.....	181,166	277	181,443	54,488	422	126,533
1984.....	198,926	551	199,477	48,963	245	150,269
1985.....	158,943	1,958	160,901	48,240	39	112,622
1986.....	141,756	4,622	146,378	59,434	(1)	86,944
1987.....	105,206	6,652	111,858	35,901	207	75,750
1988.....	88,419	3,528	91,947	32,900	93	58,954
1989.....	197,044	2,943	199,987	40,415	82	159,490
1990.....	196,383	1,378	197,761	49,400	146	148,215
1991.....	195,744	983	196,727	66,019	115	130,593

(1) Less than 500 lb. *Records--1936 U.S. pack: 430,328,000 lb; 1959 imports: 31,154,000 lb, 1980 domestic exports: 74,006,000 lb.

U.S. SUPPLY OF CLAM MEATS, 1982-91
(Meat weight)

Year	U.S. commercial landings					Imports (1)	Exports		Total supply
	Hard	Soft	Surf	Other	Total		Domestic	Foreign	
	-----Thousand pounds-----								
1982...	12,855	8,021	49,720	37,709	108,305	11,122	(2)	(2)	119,427
1983...	14,186	8,460	55,938	36,821	115,405	11,006	(2)	(2)	126,411
1984...	14,749	7,919	70,243	40,010	132,921	11,113	(2)	(2)	144,034
1985...	16,697	7,865	72,520	53,469	*150,551	12,979	931	40	*162,559
1986...	11,793	5,887	78,749	48,964	145,393	16,880	1,227	16	161,030
1987...	11,418	7,469	60,744	54,726	134,357	*17,641	1,146	11	150,841
1988...	12,371	6,814	63,545	49,010	131,740	14,872	1,449	9	145,154
1989...	9,278	6,829	67,072	54,987	138,166	13,254	1,757	106	149,557
1990...	9,833	5,756	71,772	51,837	139,198	15,830	2,837	124	152,067
1991...	12,311	4,225	66,219	51,488	134,243	12,297	2,836	112	143,592

(1) Imports and exports were converted to meat weight by using these conversion factors: 0.40, in shell or shucked; 0.30 canned chowder and juice; and 0.93, other. (2) Not reported. *Record.

SUPPLY OF FISHERY PRODUCTS

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U.S. SUPPLY OF KING CRAB, 1982-91 (Round weight)

Year	U.S. commercial landings	Exports (1)		Total supply
		Frozen	Canned	
-----Thousand pounds-----				
1982.....	38,492	8,958	1,071	28,463
1983.....	25,581	2,039	346	23,196
1984.....	17,204	3,521	448	13,235
1985.....	15,363	4,053	752	10,558
1986.....	25,909	6,941	267	18,701
1987.....	29,065	14,656	336	14,073
1988.....	20,973	9,189	1,332	10,452
1989.....	26,391	(2)	181	(2)
1990.....	33,917	(2)	396	(2)
1991.....	28,140	15,038	282	12,820

(1) Domestic merchandise. Converted to round (live) weight by using these conversion factors: frozen, 1.75; meat, 4.50; and canned, 5.33 (2) Unavailable. Record U.S. landings 185,624,000 lb.

U.S. SUPPLY OF SNOW (TANNER) CRABS, 1982-91 (Round weight)

Year	U.S. commercial landings	Imports (1)	Total	Exports (2)	Total supply
-----Thousand pounds-----					
1982.....	68,767	3,135	71,902	47,220	24,682
1983.....	61,077	3,362	64,439	34,415	30,024
1984.....	48,765	4,992	53,757	31,127	22,630
1985.....	85,742	6,572	92,314	47,436	44,878
1986.....	110,000	5,510	115,510	66,925	48,585
1987.....	113,812	7,706	121,518	92,312	29,206
1988.....	146,326	6,765	153,091	122,402	30,689
1989.....	164,643	2,575	167,218	(3)	(3)
1990.....	213,395	4,977	218,372	(3)	(3)
1991.....	*357,122	3,092	*360,214	*155,180	205,034

(1) Converted to round (live) weight by multiplying canned weight by 5.00; fresh and frozen, 1.50; and meat, 4.50. (2) Domestic merchandise converted to round (live) weight by multiplying frozen weight by 2.13 (believed to be mostly sections); meat, 4.50; and canned, 5.33. Unavailable. *Record.

U.S. SUPPLY OF CANNED CRABMEAT, 1982-91 (Canned weight)

Year	U.S. pack	Percent of total	Imports	Percent of total	Total	Exports	Total supply
	<u>Thousand pounds</u>	<u>Percent</u>	<u>Thousand pounds</u>	<u>Percent</u>	-----Thousand pounds-----		
1982.....	1,349	19.0	5,737	81.0	7,086	201	6,885
1983.....	1,435	18.1	6,505	81.9	7,940	65	7,875
1984.....	1,084	14.8	6,233	85.2	7,317	84	7,233
1985.....	553	6.8	7,584	93.2	8,137	141	7,996
1986.....	591	6.3	8,778	93.7	9,369	50	9,319
1987.....	200	2.4	7,967	97.6	8,167	63	8,104
1988.....	359	4.4	7,720	95.6	8,079	250	7,829
1989.....	504	5.7	8,280	94.3	8,784	910	7,874
1990.....	695	7.5	8,563	92.5	9,258	373	8,885
1991.....	77	0.7	11,385	99.3	11,462	520	10,942

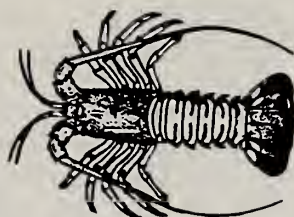
Records--1966 U.S. pack: 11,002,000 lb; 1939 imports: 13,507,000 lb.

SUPPLY OF FISHERY PRODUCTS

U.S. SUPPLY OF AMERICAN LOBSTERS, 1982-91
(Round weight)

Year	U.S. commercial landings		Imports (1)				Total supply
	Quantity	Percentage of total supply	Quantity			Percentage of total supply	
			Fresh and frozen	Canned	Total		
	<u>Thousand pounds</u>	<u>Percent</u>	<u>-----Thousand pounds-----</u>			<u>Percent</u>	<u>Thousand pounds</u>
1982.....	39,445	48.6	26,205	15,480	41,685	51.4	81,130
1983.....	44,206	47.7	43,439	4,977	48,416	52.3	92,622
1984.....	43,967	43.9	54,359	1,783	56,142	56.1	100,109
1985.....	46,152	42.9	57,358	4,029	61,387	57.1	107,539
1986.....	46,053	40.8	65,276	1,633	66,909	59.2	112,962
1987.....	45,558	39.6	66,585	2,956	69,541	60.4	115,099
1988.....	48,643	40.1	69,790	2,756	*72,546	59.9	121,189
1989.....	52,926	56.3	40,357	696	41,053	43.7	93,979
1990.....	61,017	55.2	48,798	756	49,554	44.8	110,571
1991.....	*63,337	49.3	58,938	6,222	65,160	50.7	*128,497

(1) Imports were converted to round (live) weight by using these conversion factors: 1.00, whole; 4.50, meat; and 4.64, canned. *Record.

U.S. SUPPLY OF SPINY LOBSTERS, 1982-91
(Round weight)

Year	U.S. commercial landings		Imports (1)				Total supply
	Quantity	Percentage of total supply	Quantity			Percentage of total supply	
			Fresh and frozen	Canned	Total		
	<u>Thousand pounds</u>	<u>Percent</u>	<u>-----Thousand pounds-----</u>			<u>Percent</u>	<u>Thousand pounds</u>
1982.....	6,438	5.1	120,679	230	120,909	95.9	127,347
1983.....	5,218	3.8	131,102	588	131,690	96.2	136,908
1984.....	6,303	4.1	146,990	79	147,069	95.9	153,372
1985.....	5,311	3.5	148,324	253	148,577	96.5	153,888
1986.....	6,775	4.5	144,933	164	145,097	95.5	151,872
1987.....	5,755	3.8	145,093	613	145,706	96.2	151,461
1988.....	7,166	5.1	131,837	234	132,071	94.9	139,237
1989.....	8,125	7.7	96,832	738	97,570	92.3	105,695
1990.....	7,120	7.5	88,223	9	88,232	92.5	95,352
1991.....	7,096	8.0	81,197	54	81,251	92.0	88,347

(1) Imports were converted to round (live) weight by using these conversion factors: 1.00, whole; 3.00, tails; 4.35, other; and 4.50 canned. *Records--1972 landings: 12,215,000 LB; 1976 imports: 168,095,000; and 1976 total supply: 173,738,000 lb.

SUPPLY OF FISHERY PRODUCTS

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U.S. SUPPLY OF OYSTERS, 1982-91 (Meat weight)

Year	U.S. commercial landings			Imports (2)	Total supply
	Eastern	Pacific (1)	Total		
	-----Thousand pounds-----				
1982.....	48,820	7,369	56,189	27,529	83,718
1983.....	46,706	7,342	54,048	30,775	84,823
1984.....	46,035	8,739	54,774	36,086	90,860
1985.....	43,085	7,796	50,881	45,926	96,807
1986.....	39,140	9,629	48,769	50,038	98,807
1987.....	29,957	9,850	39,807	*52,085	91,892
1988.....	23,916	7,976	31,892	46,414	78,306
1989.....	21,398	7,852	29,250	37,662	66,912
1990.....	18,395	10,798	29,193	27,546	56,739
1991.....	21,933	9,926	31,859	15,674	47,533

(1) Includes Western and Eastern oyster landings for Washington and California. (2) Imports were converted to meat weight by using these conversion factors: 0.93, canned; 3.12, canned smoked; and 0.75, other. *Record. Record - 1908 landings: 152,046,000 lb.



U.S. SUPPLY OF SCALLOP MEATS, 1982-91 (Meat weight)

Year	U.S. commercial landings				Imports	Total supply
	Bay	Calico	Sea	Total		
	-----Thousand pounds-----					
1982.....	1,780	11,010	21,325	34,115	20,860	54,975
1983.....	2,338	9,606	20,478	32,422	34,280	66,702
1984.....	1,728	39,330	18,427	*59,485	27,270	*86,755
1985.....	1,331	12,513	15,829	29,673	42,035	71,708
1986.....	735	1,616	19,992	22,343	*47,916	70,259
1987.....	580	8,155	32,038	40,773	39,934	80,707
1988.....	569	11,868	30,557	42,994	32,039	75,033
1989.....	274	6,580	33,757	40,611	40,874	81,485
1990.....	539	1,135	39,917	41,591	39,839	81,430
1991.....	438	286	39,302	40,026	29,528	69,554

*Record.

SUPPLY OF FISHERY PRODUCTS

U.S. SUPPLY OF ALL FORMS OF SHRIMP, 1982-91
(Heads-off weight)

Year	U.S. Commercial landings	Imports (1)	Total	Exports (2)				Total supply
				Fresh and frozen		Canned		
				Domestic	Foreign	Domestic	Foreign	
-----Thousand pounds-----								
1982....	175,613	319,596	495,209	18,350	12,738	6,064	45	458,012
1983....	155,591	421,179	576,770	21,776	6,560	7,573	28	540,833
1984....	188,132	422,340	610,472	15,961	5,069	5,478	83	583,881
1985....	207,239	452,232	659,471	17,708	5,735	3,159	338	632,531
1986....	244,409	492,005	736,414	23,650	2,548	3,967	285	705,964
1987....	223,514	583,030	806,544	25,938	2,947	4,714	214	*772,731
1988....	203,350	598,210	801,560	26,097	4,183	4,068	436	766,776
1989....	215,825	563,523	779,348	25,658	6,057	4,127	214	743,292
1990....	213,899	579,427	793,326	41,927	12,259	4,975	522	733,643
1991....	198,115	*632,775	*830,890	56,973	25,352	4,307	554	743,703

(1) Imports were converted to heads-off weight by using these conversion factors: 0.63, breaded; 1.00, shell-on; 1.28, peeled raw; 2.52, canned; and 2.40, other. (2) Exports were converted to heads-off weight by using these conversion factors: domestic--fresh and frozen, 1.18; other, 2.40; and canned 2.02; foreign--fresh frozen, 1.00; canned, 2.52; and other, 2.40.

*Record. Records--1977 U.S. commercial landings: 288,443,000 lb (heads off); 1973 fresh and frozen domestic exports: 44,172,000 lb; 1970 fresh and frozen foreign exports: 14,699,000 lb; and 1973 domestic canned: 20,097,000 lb.

U.S. SUPPLY OF CANNED SHRIMP, 1982-91
(Canned weight)

Year	U.S. pack	Percent of total	Imports	Percent of total	Total	Exports		Total supply
						Domestic	Foreign	
	<u>Thousand pounds</u>	<u>Percent</u>	<u>Thousand pounds</u>	<u>Percent</u>	<u>-----Thousand pounds-----</u>			
1982....	6,276	54.1	5,332	45.9	11,608	3,002	18	8,588
1983....	6,723	33.8	13,176	66.2	19,899	3,749	11	16,139
1984....	7,246	34.8	13,580	65.2	20,826	2,712	33	18,081
1985....	4,001	19.0	17,088	81.0	21,089	1,564	134	19,391
1986....	4,596	22.6	15,757	77.4	20,353	1,964	113	18,276
1987....	4,382	20.4	17,132	79.6	21,514	2,334	85	19,095
1988....	4,476	24.0	14,138	76.0	18,614	2,014	173	16,427
1989....	2,623	18.8	11,315	81.2	13,938	2,043	85	11,810
1990....	710	6.8	9,735	93.2	10,445	2,463	207	7,775
1991....	632	6.3	9,361	93.7	9,993	2,132	220	7,641

*Record. Records--1973 U.S. pack: 25,228,000 lb; 1970 total: 29,001,000 lb; 1973 domestic exports: 9,949,000 lb.

SUPPLY OF FISHERY PRODUCTS

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U.S. SUPPLY OF FISH MEAL AND SOLUBLES, 1982-91 (Product weight)

Year	Domestic production (1)		Imports (2)		Total
	Thousand pounds	Percent	Thousand pounds	Percent	Thousand pounds
1982.....	899,356	84.2	168,664	15.8	1,068,020
1983.....	*922,040	87.2	135,880	12.8	1,057,920
1984.....	877,566	84.0	166,888	16.0	1,044,454
1985.....	883,196	63.4	510,654	36.6	1,393,850
1986.....	799,826	68.3	370,548	31.7	1,170,374
1987.....	911,622	69.8	393,730	30.2	1,305,352
1988.....	755,520	74.0	265,310	26.0	1,020,830
1989.....	734,736	81.1	171,112	18.9	905,848
1990.....	670,328	73.7	239,426	26.3	909,754
1991.....	697,520	81.4	158,916	18.6	856,436

(1) Includes shellfish meal production plus the production of U.S. solubles. (2) Data do not include imports of fish solubles. *Record. Records--1968 imports: 1,712,344,000 lb, 1968 total supply: 2,254,450,000 lb.

Note:--Wet weight of solubles has been converted to dry weight by reducing its poundage by one-half.

U.S. SUPPLY OF FISH MEAL, 1982-91 (Product weight)

Year	Domestic production (1)	Imports	Total	Exports	
				Domestic	Foreign
			-----Thousand pounds-----		
1982.....	746,854	168,664	915,518	35,880	4,662
1983.....	763,536	135,880	899,416	154,834	6,848
1984.....	751,528	166,888	918,416	40,356	1,234
1985.....	721,682	510,654	1,232,336	69,166	808
1986.....	702,194	370,548	1,072,742	77,020	952
1987.....	*786,978	393,730	1,180,962	103,422	664
1988.....	643,796	265,310	909,106	150,262	3,684
1989.....	618,382	171,112	789,494	103,790	3,560
1990.....	577,498	239,426	816,924	137,728	4,160
1991.....	612,716	158,916	771,632	205,039	1,281

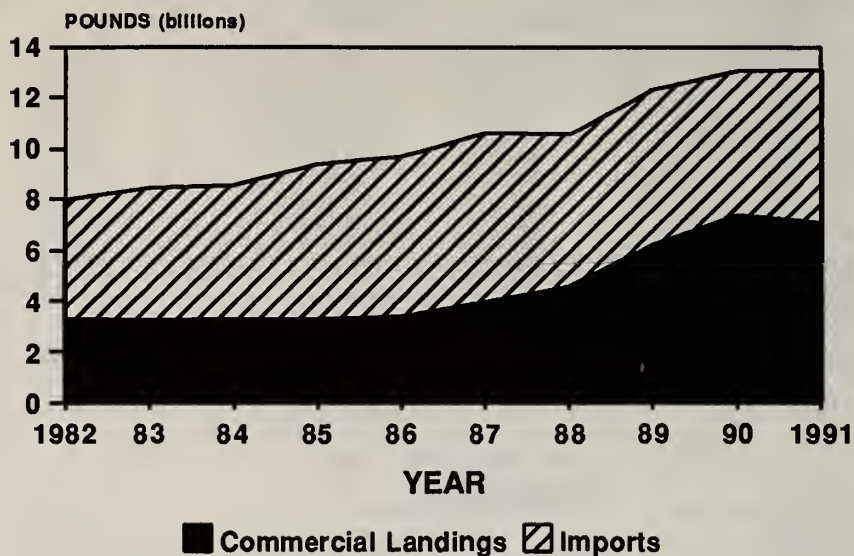
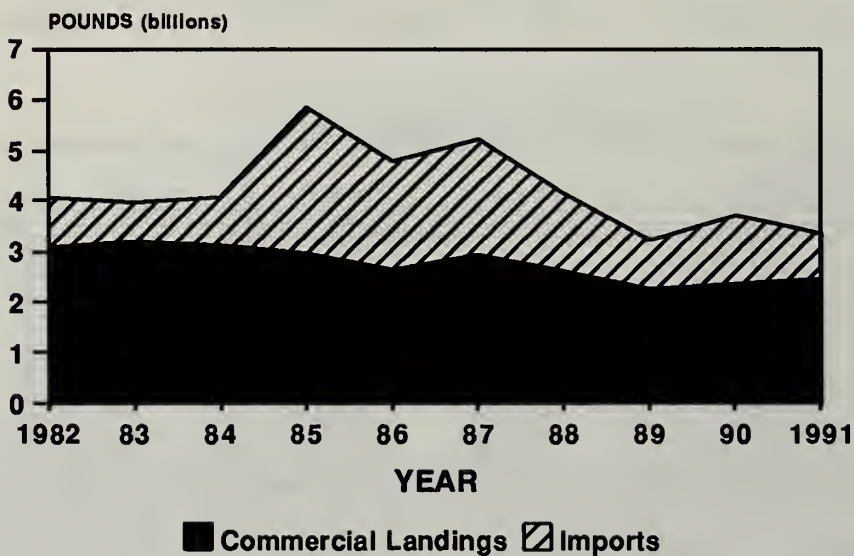
(1) Includes shellfish meal. *Record. Records--1968 imports: 1,710,570,000 lb; 1968 total supply 2,180,842,000 lb.

U.S. SUPPLY OF FISH OILS, 1982-91

Year	Domestic production	Imports	Total	Exports	Total supply
-----Thousand pounds-----					
1982.....	347,513	12,699	360,212	202,345	157,867
1983.....	*399,334	15,334	414,668	*404,087	10,581
1984.....	372,804	13,426	386,230	399,425	(1)
1985.....	285,077	17,254	302,331	279,080	23,251
1986.....	336,708	19,212	355,920	192,214	163,706
1987.....	298,496	25,697	324,193	249,119	75,074
1988.....	224,733	27,667	252,400	149,279	103,121
1989.....	225,478	25,449	250,927	194,795	56,132
1990.....	281,949	36,702	318,651	222,341	96,310
1991.....	267,345	21,828	289,173	254,063	35,110

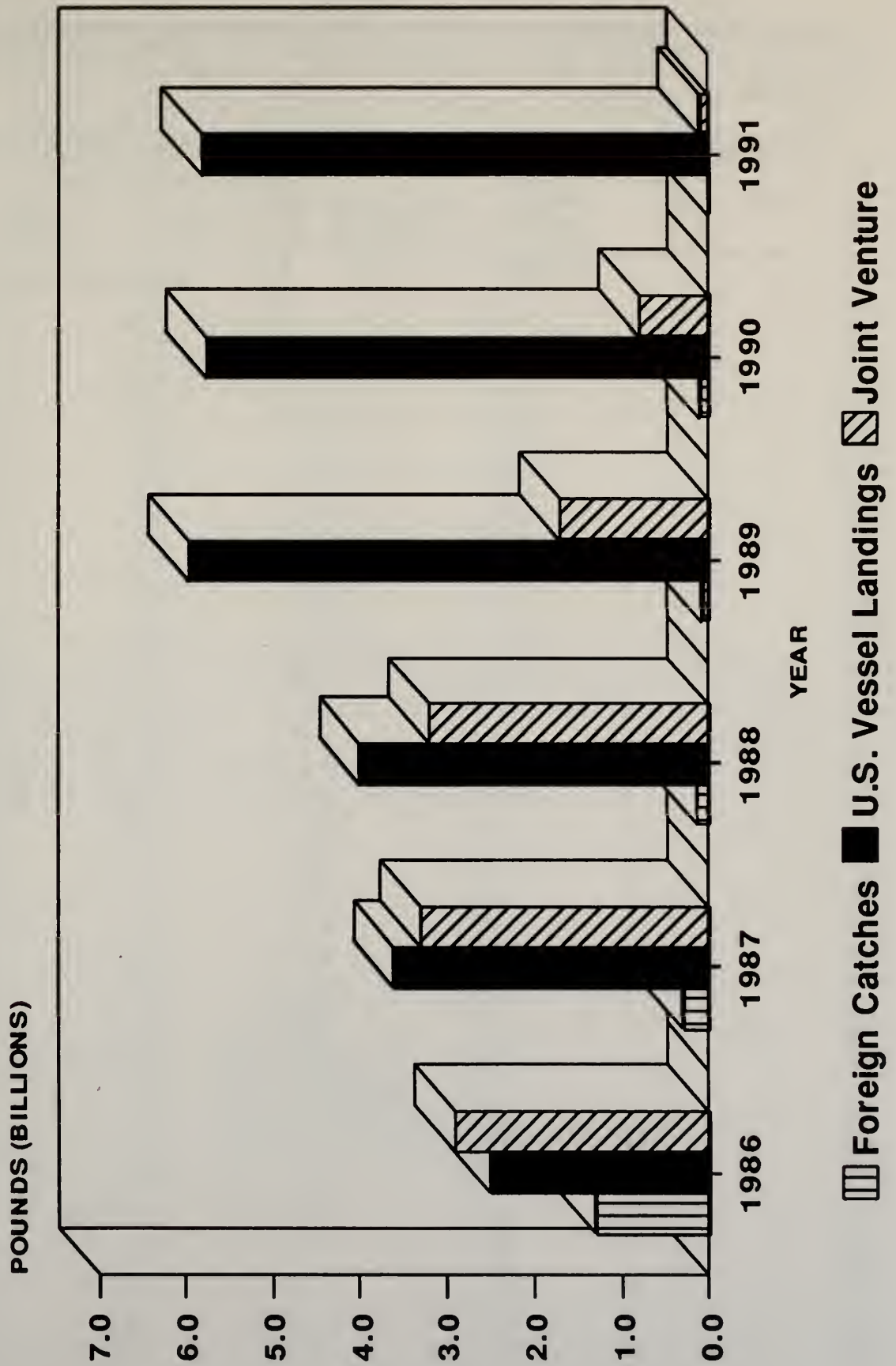
(1) The 1984 exports, which included prior year stocks, exceed domestic production plus imports. *Record.

Note:--Does not include exports of foreign merchandise.

SUPPLY OF FISHERY PRODUCTS**U.S. SUPPLY OF EDIBLE FISHERY PRODUCTS
(ROUND WEIGHT)
1982 - 1991****SUPPLY OF INDUSTRIAL FISHERY PRODUCTS
(ROUND WEIGHT)
1982 - 1991**

COMMERCIAL CATCHES IN THE U.S. EXCLUSIVE ECONOMIC ZONE (EEZ)

1986 - 1991



PER CAPITA

U.S. CONSUMPTION

Annual per capita consumption of seafood products represents the pounds of edible meat consumed from domestically-caught and imported fish and shellfish adjusted for beginning and ending inventories, and exports, divided by the civilian population of the United States as of July 1 of each year.

U.S. ANNUAL PER CAPITA CONSUMPTION OF COMMERCIAL FISH AND SHELLFISH, 1909-91

Year	Civilian resident population July 1 (1)	Per capita consumption			
		Fresh and frozen (2)	Canned (3)	Cured (4)	Total
	<u>Million persons</u>	<u>- - - - -Pounds, edible meat- - - - -</u>			
1909 (5).....	90.5	4.3	2.7	*4.0	11.0
1910.....	92.2	4.5	2.8	3.9	11.2
1911.....	93.9	4.8	2.8	3.7	11.3
1912.....	95.3	5.0	2.9	3.4	11.3
1913.....	97.2	5.3	2.9	3.3	11.5
1914.....	99.1	5.6	3.0	3.1	11.7
1915.....	100.5	5.8	2.4	3.0	11.2
1916.....	102.0	6.0	2.2	2.8	11.0
1917.....	103.3	6.2	2.0	2.7	10.9
1918.....	103.2	6.4	2.0	2.5	10.9
1919.....	104.5	6.4	2.8	2.4	11.6
1920.....	106.5	6.3	3.2	2.3	11.8
1921.....	108.5	6.2	2.2	2.1	10.5
1922.....	110.0	6.1	3.2	2.0	11.3
1923.....	111.9	6.0	2.9	1.8	10.7
1924.....	114.1	6.1	3.2	1.7	11.0
1925.....	115.8	6.3	3.2	1.6	11.1
1926.....	117.4	6.6	3.4	1.4	11.4
1927.....	119.0	7.0	3.9	1.3	12.2
1928.....	120.5	7.1	3.9	1.1	12.1
1929.....	121.8	6.9	3.9	1.1	11.9
1930.....	122.9	5.8	3.4	1.0	10.2
1931.....	123.9	4.9	3.2	0.7	8.8
1932.....	124.7	4.3	3.4	0.7	8.4
1933.....	125.4	4.2	3.9	0.6	8.7
1934.....	126.2	4.3	4.2	0.7	9.2
1935.....	127.1	5.1	4.7	0.7	10.5
1936.....	127.9	5.2	*5.8	0.7	11.7
1937.....	128.6	5.6	5.3	0.9	11.8
1938.....	129.6	5.2	4.8	0.8	10.8
1939.....	130.7	5.3	4.7	0.7	10.7
1940.....	132.1	5.7	4.6	0.7	11.0
1941.....	132.1	6.3	4.2	0.7	11.2
1942.....	131.4	5.2	2.9	0.6	8.7
1943.....	128.0	5.5	1.8	0.6	7.9
1944.....	127.2	5.5	2.6	0.6	8.7
1945.....	128.1	6.6	2.6	0.7	9.9
1946.....	138.9	5.9	4.2	0.7	10.8
1947.....	143.1	5.8	3.8	0.7	10.3
1948.....	145.7	6.0	4.4	0.7	11.1
1949.....	148.2	5.8	4.5	0.6	10.9
1950.....	150.8	6.3	4.9	0.6	11.8
1951.....	151.6	6.3	4.3	0.6	11.2
1952.....	153.9	6.2	4.3	0.7	11.2
1953.....	156.6	6.4	4.3	0.7	11.4
1954.....	159.7	6.2	4.3	0.7	11.2
1955.....	163.0	5.9	3.9	0.7	10.5
1956.....	166.1	5.7	4.0	0.7	10.4
1957.....	169.1	5.5	4.0	0.7	10.2
1958.....	172.2	5.7	4.3	0.6	10.6
1959.....	175.3	5.9	4.4	0.6	10.9
1960.....	178.1	5.7	4.0	0.6	10.3
1961.....	181.1	5.9	4.3	0.5	10.7
1962.....	183.7	5.8	4.3	0.5	10.6
1963.....	186.5	5.8	4.4	0.5	10.7
1964.....	189.1	5.9	4.1	0.5	10.5
1965.....	191.6	6.0	4.3	0.5	10.8
1966.....	193.4	6.1	4.3	0.5	10.9
1967.....	195.3	5.8	4.3	0.5	10.6
1968.....	197.1	6.2	4.3	0.5	11.0
1969.....	199.1	6.6	4.2	0.4	11.2

PER CAPITA

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U.S. CONSUMPTION

U.S. ANNUAL PER CAPITA CONSUMPTION OF COMMERCIAL FISH AND SHELLFISH, 1909-91 - Continued

Year	Civilian resident population July 1 (1)	Per capita consumption			
		Fresh and frozen (2)	Canned (3)	Cured (4)	Total
	<u>Million persons</u>	<u>-----Pounds, edible meat-----</u>			
1971.....	204.9	6.7	4.3	0.5	11.5
1972.....	207.5	7.1	4.9	0.5	12.5
1973.....	209.6	7.4	5.0	0.4	12.8
1974.....	211.6	6.9	4.7	0.5	12.1
1975.....	213.8	7.5	4.3	0.4	12.2
1976.....	215.9	8.2	4.2	0.5	12.9
1977.....	218.1	7.7	4.6	0.4	12.7
1978.....	220.5	8.1	5.0	0.3	13.4
1979.....	223.0	7.8	4.8	0.4	13.0
1980.....	225.7	7.9	4.3	0.3	12.5
1981.....	227.9	7.8	4.6	0.3	12.7
1982.....	230.3	7.9	4.3	0.3	12.5
1983.....	232.6	8.4	4.7	0.3	13.4
1984.....	234.8	9.0	4.9	0.3	14.2
1985.....	237.0	9.8	5.0	0.3	15.1
1986.....	239.4	9.8	5.4	0.3	15.5
1987.....	241.7	*10.7	5.2	0.3	*16.2
1988.....	244.1	10.0	4.9	0.3	15.2
1989.....	246.6	10.2	5.1	0.3	15.6
1990 (6).....	249.2	9.6	5.1	0.3	15.0
1991.....	251.3	9.7	4.9	0.3	14.9

(1) Resident population for 1909 to 1929 and civilian resident population for 1930 to date.

(2) Fresh and frozen fish consumption from 1910 to 1928 is estimated. Beginning in 1973, data include consumption of artificially cultivated catfish. Domestic landings used in calculating consumption are preliminary after 1977.

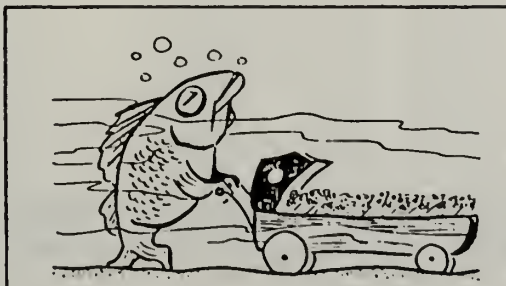
(3) Canned fish consumption for 1911 to 1920 is estimated. Beginning in 1921, it is based on production reports, packer stocks, and foreign trade statistics for individual years.

(4) Cured fish consumption for 1910 to 1928 is estimated.

(5) Data for 1909 estimate based on the 1908 census and foreign trade data.

(6) Data revised.

*Record.



PER CAPITA

U.S. CONSUMPTION

U.S. ANNUAL PER CAPITA CONSUMPTION OF CANNED FISHERY PRODUCTS, 1971-91

Year	Salmon	Sardines	Tuna	Shellfish	Other	Total
-----Pounds-----						
1971.....	0.7	0.4	2.4	0.5	0.3	4.3
1972.....	0.7	0.4	2.9	0.5	0.4	4.9
1973.....	0.4	0.5	3.1	0.5	0.5	5.0
1974.....	0.3	0.4	3.1	0.5	0.4	4.7
1975.....	0.3	0.2	2.9	0.5	0.4	4.3
1976.....	0.3	0.3	2.8	0.4	0.4	4.2
1977.....	0.5	0.3	2.8	0.6	0.4	4.6
1978.....	0.6	0.3	3.3	0.5	0.3	5.0
1979.....	0.5	0.3	3.2	0.5	0.3	4.8
1980.....	0.5	0.3	3.0	0.4	0.1	4.3
1981.....	0.5	0.4	3.0	0.4	0.3	4.6
1982.....	0.5	0.3	2.8	0.4	0.3	4.3
1983.....	0.5	0.2	3.2	0.4	0.4	4.7
1984.....	0.6	0.2	3.2	0.4	0.5	4.9
1985.....	0.5	0.3	3.3	0.5	0.4	5.0
1986.....	0.5	0.3	3.6	0.5	0.5	5.4
1987.....	0.4	0.3	3.5	0.5	0.5	5.2
1988.....	0.3	0.3	3.6	0.4	0.3	4.9
1989.....	0.3	0.3	3.9	0.4	0.2	5.1
1990.....	0.4	0.3	3.7	0.3	0.4	5.1
1991.....	0.5	0.2	3.6	0.4	0.2	4.9

NOTE:--Domestic landings data used in calculating these data are preliminary after 1977.

U.S. ANNUAL PER CAPITA CONSUMPTION OF CERTAIN FISHERY ITEMS, 1971-91

Year	Fillets and steaks (1)	Sticks and portions	Shrimp all preparation
-----Pounds (2)-----			
1971.....	2.0	1.6	1.4
1972.....	2.3	1.8	1.4
1973.....	2.5	2.0	1.4
1974.....	2.1	1.8	1.5
1975.....	2.4	1.8	1.4
1976.....	2.5	2.0	1.5
1977.....	2.5	2.0	1.6
1978.....	2.7	2.2	1.5
1979.....	2.7	*2.2	1.3
1980.....	2.4	2.0	1.4
1981.....	2.4	1.8	1.5
1982.....	2.5	1.7	1.5
1983.....	2.7	1.8	1.7
1984.....	3.0	1.8	1.9
1985.....	3.2	1.8	2.0
1986.....	3.4	1.8	2.2
1987.....	*3.6	1.7	*2.4
1988.....	3.2	1.5	2.4
1989.....	3.1	1.5	2.3
1990.....	3.1	1.5	2.2
1991.....	3.0	1.2	2.4

(1) Data include groundfish and other species. Data do not include blocks, but fillets could be made into blocks from which sticks and portions could be produced.

(2) Product weight of fillets and steaks and sticks and portions, edible (meat) weight of shrimp.
*Record.

Note:--Domestic landings data used in calculating these data are preliminary after 1977.

PER CAPITA

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U.S. USE

Per capita use of commercial fish and shellfish is based on the supply of fishery products, both edible and nonedible (industrial), on a round weight equivalent basis, without considering beginning or ending stocks, defense purchases, or exports.

Per capita use figures are not comparable with per capita consumption data. Per capita consumption figures represent edible (for human use) meat weight consumption rather than round weight consumption. In addition, per capita consumption includes allowances for beginning and ending stocks and exports, whereas the use does not include such allowances.

Per capita use is derived by using total population including U.S. Armed Forces overseas. The per capita consumption is derived by using civilian resident population.

U.S. ANNUAL PER CAPITA USE OF COMMERCIAL FISH AND SHELLFISH, 1956-91 (1)

Year	Total population including armed forces overseas July 1	Total U.S. supply	Per capita utilization		
			Commercial landings	Imports	Total
	<u>Million persons</u>	<u>Million pounds</u>	<u>-----Pounds-----</u>		
1956.....	168.9	7,569	31.2	13.6	44.8
1957.....	172.0	7,164	27.9	13.8	41.7
1958.....	174.9	7,526	27.1	15.9	43.0
1959.....	177.8	8,460	28.8	18.8	47.6
1960.....	180.7	8,223	27.3	18.2	45.5
1961.....	183.7	9,570	28.2	23.9	52.1
1962.....	186.5	10,408	28.7	27.1	55.8
1963.....	189.2	11,434	25.6	34.8	60.4
1964.....	191.9	12,031	23.7	39.0	62.7
1965.....	194.3	10,535	24.6	29.6	54.2
1966.....	196.6	12,469	22.2	41.2	63.4
1967.....	198.7	13,991	20.4	50.0	70.4
1968.....	200.7	17,381	20.7	65.9	86.6
1969.....	202.7	11,847	21.4	37.0	58.4
1970.....	205.1	11,474	24.0	31.9	55.9
1971.....	207.7	11,804	24.1	32.7	56.8
1972.....	209.9	13,849	22.9	43.1	66.0
1973.....	211.9	10,378	22.9	26.1	49.0
1974.....	213.9	9,875	23.2	23.0	46.2
1975.....	216.0	10,164	22.6	24.5	47.1
1976.....	218.0	11,593	24.7	28.5	53.2
1977.....	220.2	10,652	23.9	24.4	48.3
1978.....	222.6	11,509	27.1	24.6	51.7
1979.....	225.1	11,831	27.9	24.7	52.6
1980.....	227.7	11,357	28.5	21.4	49.9
1981.....	229.8	11,353	26.0	23.4	49.4
1982.....	232.1	12,011	27.5	24.3	51.8
1983.....	234.2	12,352	27.5	25.2	52.7
1984.....	237.0	12,552	27.2	25.8	53.0
1985.....	239.3	15,061	26.2	36.8	63.0
1986.....	241.6	14,368	25.0	34.5	59.5
1987.....	243.9	15,744	28.3	36.3	64.6
1988.....	246.3	14,628	29.2	30.2	59.4
1989.....	248.8	15,485	34.0	28.2	62.2
1990.....	251.4	16,348	37.4	27.6	65.0
1991.....	253.5	16,363	37.4	27.1	64.5

(1) Data include U.S. commercial landings and imports of both edible and nonedible (industrial) fishery products on a round weight basis. "Total supply" is not adjusted for beginning and ending stocks, defense purchases, or exports.

PER CAPITA

WORLD CONSUMPTION

ANNUAL PER CAPITA CONSUMPTION OF FISH AND SHELLFISH FOR HUMAN FOOD,
BY REGION AND COUNTRY, 1987-89 AVERAGE

Region and country	Estimated live weight equivalent		Region and country	Estimated live weight equivalent	
	Kilograms	Pounds		Kilograms	Pounds
North America:			Europe - Continued:		
Canada.....	24.4	53.8	Greece.....	18.2	40.1
Greenland.....	85.6	188.7	Hungary.....	5.0	11.0
St. Pierre and Miquelon.....	76.3	168.2	Iceland.....	92.3	203.5
United States.....	21.3	47.0	Ireland.....	16.5	36.4
			Italy.....	20.3	44.8
Caribbean:			Malta.....	15.3	33.7
Antigua.....	39.3	86.6	Netherlands.....	8.0	17.6
Aruba.....	35.6	78.5	Norway.....	44.0	97.0
Bahamas.....	22.6	49.8	Poland.....	13.8	30.4
Barbados.....	30.4	67.0	Portugal.....	57.6	127.0
Bermuda.....	48.5	106.9	Romania.....	8.8	19.4
British Virgin Islands.	25.2	55.6	Spain.....	37.1	81.8
Cayman Islands.....	21.5	47.4	Sweden.....	27.3	60.2
Cuba.....	21.1	46.5	Switzerland.....	13.0	28.7
Dominica.....	15.9	35.1	United Kingdom.....	19.6	43.2
Dominican Republic....	5.6	12.3	Yugoslavia.....	3.8	8.4
Grenada.....	28.9	63.7	USSR.....	28.9	63.7
Guadeloupe.....	47.7	105.2			
Haiti.....	4.3	9.5	Near East:		
Jamaica.....	18.7	41.2	Afghanistan.....	0.1	0.2
Martinique.....	43.2	95.2	Bahrain.....	20.0	44.1
Montserrat.....	9.3	20.5	Cyprus.....	13.2	29.1
Netherland Antilles....	26.2	57.8	Egypt.....	7.4	16.3
St. Christopher-Nevis..	44.3	97.7	Iran.....	4.4	9.7
Saint Lucia.....	14.7	32.4	Iraq.....	1.1	2.4
St. Vincent.....	9.0	19.8	Israel.....	21.4	47.2
Trinidad-Tobago.....	8.7	19.2	Jordan.....	3.3	7.3
			Kuwait.....	10.9	24.0
Latin America:			Lebanon.....	0.6	1.3
Argentina.....	7.0	15.4	Libya.....	3.6	7.9
Belize.....	7.1	15.7	Oman.....	27.1	59.7
Bolivia.....	0.8	1.8	Qatar.....	7.6	16.8
Brazil.....	6.3	13.9	Saudi Arabia.....	7.0	15.4
Chile.....	22.2	48.9	Sudan.....	1.0	2.2
Colombia.....	3.1	6.8	Syria.....	0.5	1.1
Costa Rica.....	4.2	9.3	Turkey.....	7.3	16.1
Ecuador.....	8.8	19.4	United Arab Emirates.	26.0	57.3
El Salvador.....	2.1	4.6	Yemen Republic.....	5.6	12.3
French Guiana.....	62.0	136.7			
Guatemala.....	0.4	0.9	Far East:		
Guyana.....	42.3	93.3	Bangladesh.....	7.3	16.1
Honduras.....	3.6	7.9	Brunei.....	30.9	68.1
Mexico.....	10.0	22.0	Burma.....	15.3	33.7
Nicaragua.....	0.9	2.0	Cambodia.....	9.0	19.8
Panama.....	12.0	26.5	China.....	8.0	17.6
Paraguay.....	2.6	5.7	Hong Kong.....	52.4	115.5
Peru.....	23.6	52.0	India.....	3.6	7.9
Suriname.....	7.4	16.3	Indonesia.....	14.2	31.3
Uruguay.....	4.3	9.5	Japan.....	72.1	159.0
Venezuela.....	13.5	29.8	Laos.....	5.1	11.2
			Macao.....	18.7	41.2
Europe:			Maldives.....	130.2	287.0
Albania.....	3.2	7.1	Malaysia.....	27.9	61.5
Austria.....	8.0	17.6	Mongolia.....	1.2	2.6
Belgium and Luxembourg.	18.1	39.9	Nepal.....	0.7	1.5
Bulgaria.....	6.4	14.1	North Korea.....	43.3	95.5
Czechoslovakia.....	6.8	15.0	Pakistan.....	1.9	4.2
Denmark.....	20.9	46.1	Philippines.....	33.8	74.5
Faeroe Island.....	86.2	190.0	Republic of Korea....	52.0	114.6
Fed. Rep. of Germany...	11.0	24.3	Singapore.....	29.6	65.3
Finland.....	31.0	68.3	Sri Lanka.....	14.9	32.8
France.....	30.1	66.4	Taiwan.....	35.2	77.6
German Democratic Rep..	13.4	29.5	Thailand.....	20.8	45.9
			Vietnam.....	13.0	28.7

See footnote at end of table.

(Continued)

WORLD CONSUMPTION

ANNUAL PER CAPITA CONSUMPTION OF FISH AND SHELLFISH FOR HUMAN FOOD,
BY REGION AND COUNTRY, 1987-89 AVERAGE - Continued

Region and country	Estimated live weight equivalent	
	Kilograms	Pounds
Africa:		
Algeria.....	4.5	9.9
Angola.....	22.5	49.6
Benin.....	10.7	23.6
Botswana.....	3.0	6.6
Burkina.....	2.0	4.4
Burundi.....	2.3	5.1
Cameroon.....	13.4	29.5
Cape Verde.....	11.2	24.7
Central African Republic.....	5.0	11.0
Chad.....	17.4	38.4
Comoros.....	11.4	25.1
Congo (Brazzaville).....	35.4	78.0
Djibouti.....	3.1	6.8
Equatorial Guinea.....	20.2	44.5
Ethiopia.....	0.1	0.2
Gabon.....	29.4	64.8
Gambia.....	15.1	33.3
Ghana.....	26.4	58.2
Guinea.....	8.2	18.1
Guinea-Bissau.....	3.4	7.5
Ivory Coast.....	16.0	35.3
Kenya.....	5.7	12.6
Lesotho.....	1.6	3.5
Liberia.....	14.2	31.3
Madagascar.....	8.0	17.6
Malawi.....	10.9	24.0
Mali.....	7.0	15.4
Mauritania.....	9.1	20.1
Mauritius.....	18.2	40.1
Morocco.....	7.5	16.5
Mozambique.....	3.1	6.8
Namibia.....	9.1	20.1
Niger.....	0.5	1.1
Nigeria.....	7.6	16.8
Republic of South Africa.....	10.2	22.5
Reunion.....	23.9	52.7
Rwanda.....	0.2	0.4
Sao Tome.....	28.4	62.6
Senegal.....	20.8	45.9
Seychelles.....	53.2	117.3
Sierra Leone.....	13.9	30.6
Somalia.....	2.3	5.1
St. Helena.....	76.9	169.5
Swaziland.....	0.2	0.4
Tanzania.....	14.7	32.4
Togo.....	14.8	32.6
Tunisia.....	10.5	23.1
Uganda.....	13.1	28.9
Zaire.....	8.5	18.7
Zambia.....	8.0	17.6
Zimbabwe.....	2.0	4.4
Oceania:		
Australia.....	18.9	41.7
Fiji.....	42.3	93.3
French Polynesia.....	32.4	71.4
New Caledonia.....	22.6	49.8
New Zealand.....	27.7	61.1
Papua New Guinea.....	23.8	52.5
Solomon Islands.....	56.0	123.5
Tonga.....	29.5	65.0
Vanuatu.....	31.7	69.9
Western Samoa.....	32.3	71.2
World.....	13.3	29.3

Note:--Data for most countries are tentative. Aquatic plants are included where applicable.

Source:--Food and Agriculture Organization of the United Nations (FAO) Yearbook of Fishery Statistics, 1990, vol. 71, Rome.

PRICES

The Exvessel Price table is an Index of changes in the relative dockside value of fish and shellfish sold by fishing vessels. The table indexes the average annual exvessel value (price per pound) received for each species or group to the average price per pound received for the same species or group in the base year 1982.

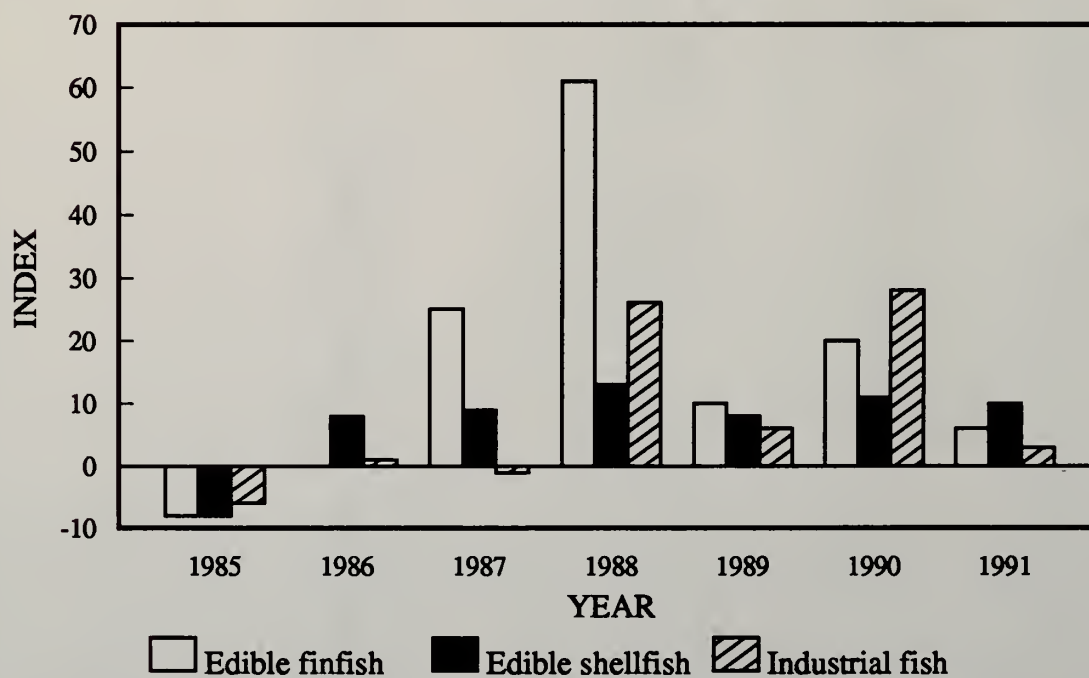
The exvessel price for each year was obtained by dividing total value for each species or group by its total quantity as reported in the distance from shore tables on pages 6-9. The Index for each species or group was obtained by multiplying the current annual price by the total quantity caught in 1982 (the base year). That number was then divided by the 1982 value to obtain the final Index:

$$\frac{(100 \times \text{Current price} \times \text{1982 quantity})}{\text{1982 Annual Value}} = \text{Index}$$

Each Index number measures price changes from the 1982 reference period when the Index equaled 100. A species of fish that sold for \$0.75 a pound in 1986 and a \$1.00 a pound in 1982 would have an Index of 75 in 1986. In 1991, if the price of the same species increased to \$1.05, the Index in 1991 would be 105.

EXVESSEL PRICE INDEX, 1985-1991

BASE YEAR 1982 = 100



Includes revised 1990 data.

INDEXES OF EXVESSEL PRICES FOR FISH AND SHELLFISH, BY YEARS, 1985-91
(1982=100)

Species	1985 (1)	1986 (1)	1987 (1)	1988 (1)	1989 (1)	1990 (1)	1991
Groundfish, et al:							
Cod.....	75	69	88	66	73	79	106
Haddock.....	189	200	257	220	239	220	227
Pollock:							
Atlantic.....	72	115	175	150	191	223	255
Alaska.....	79	85	110	121	134	151	149
Flounders.....	70	64	70	55	66	112	97
Total groundfish, et al.	85	83	101	84	96	121	122
Halibut.....	73	124	135	104	131	159	175
Sea herring.....	144	133	144	162	74	97	86
Salmon:							
Chinook.....	87	90	110	141	85	101	101
Chum.....	87	89	113	206	98	109	73
Pink.....	104	91	147	319	159	138	57
Sockeye.....	114	161	177	258	142	140	88
Coho.....	89	80	145	198	77	105	72
Total salmon.....	102	121	151	232	120	125	82
Swordfish.....	99	115	130	121	119	108	102
Tuna:							
Albacore.....	78	78	111	124	126	127	114
Bluefin.....	160	81	483	587	612	572	1158
Skipjack.....	67	68	80	103	86	85	83
Yellowfin.....	76	72	92	114	101	112	116
Total tuna.....	74	71	97	121	108	112	126
Total edible finfish.....	92	100	125	161	110	120	106
Clams:							
Hard.....	92	119	130	164	145	127	142
Ocean quahog.....	98	111	106	103	103	111	124
Soft.....	150	171	145	150	159	213	192
Surf.....	103	104	88	88	88	86	84
Total clams.....	105	122	118	134	127	127	132
Crabs:							
Blue.....	111	124	142	153	155	152	131
Dungeness.....	147	138	138	122	118	162	159
King.....	88	114	114	135	135	145	99
Snow.....	57	72	82	89	92	83	53
Total crabs.....	91	107	113	124	125	131	99
American lobster.....	108	114	127	130	122	110	113
Oysters.....	113	137	165	175	198	228	219
Scallops:							
Bay.....	115	229	140	155	158	149	157
Calico.....	97	186	106	102	88	110	292
Sea.....	129	133	113	115	107	105	110
Total scallops.....	124	146	114	116	109	109	135
Shrimp:							
Gulf and South Atlantic.	77	92	89	90	79	79	87
Other.....	95	113	155	102	92	113	130
Total shrimp.....	77	93	92	91	80	81	89
Total edible shellfish....	92	108	109	113	108	111	110
Total edible fish and shellfish.....	92	104	116	134	109	115	108
Industrial fish, Menhaden.....	94	101	99	126	106	128	103
All fish and shellfish....	92	104	115	134	109	116	108

(1) Revised.

SUMMARY OF 1991 VALUE ADDED, MARGINS, AND CONSUMER EXPENDITURES FOR COMMERCIAL MARINE FISHERY PRODUCTS IN THE UNITED STATES (1)

Sector or type of activity	Purchase of fishery inputs	Mark-up of fishery inputs	Total mark-up within sector	Value added as percent of total mark-up	Value added within sector	Value of sales by sector	Value added contribution	Offshore fleet & exported fishery products
	Thousand Dollars	Percentage of fishery inputs	Thousand Dollars	Percentage	Thousand Dollars	Thousand Dollars	Percentage of GNP Contribution	Thousand Dollars
Domestic Harvest:								
Edible.....	-	100.0	\$3,230,578	63.31	\$2,045,311	\$3,230,578	13.4	
Industrial.....	-	100.0	\$77,694	61.39	\$47,696	\$77,694	0.3	
Harvest not landed in U.S....	-	100.0	\$214,092	68.86	\$147,427	\$214,092	0.9	\$214,092
Imports, Unprocessed..	\$2,240,597	-	-	-	-	\$2,240,597	-	
Exports, Unprocessed..	-	-	-	-	-	-	-	\$1,118,210
Primary Wholesale and Processing.....	\$4,430,659	107.1	\$4,743,344	57.4	\$2,723,993	\$9,174,004	16.5	
Imports, Processed....	\$3,529,061	-	-	-	-	\$3,529,061	-	
Exports, Processed....	-	-	-	-	-	-	-	\$2,031,353
Secondary Wholesale and Processing:								
Edible.....	\$10,548,052	22.8	\$2,403,618	54.9	\$1,319,595	\$12,951,670	8.0	
Industrial.....	\$123,659	22.8	\$28,179	54.9	\$15,470	\$151,838	0.1	
Retail Trade from Food Service.....	\$6,548,635	177.8	\$11,645,034	73.4	\$8,541,987	\$18,193,669	51.8	
Retail Trade from Stores.....	\$6,403,035	31.9	\$2,043,127	80.5	\$1,644,081	\$8,446,162	10.0	
TOTAL U.S. VALUE ADDED ACTIVITY:					\$16,485,559	\$26,791,668	100.0	
CONSUMERS EXPENDITURES (& WHOLESALE PURCHASES OF INDUSTRIAL PRODUCTS) FOR FISHERY PRODUCTS:								
						\$26,791,668		

(1) Includes Industrial products, landings by U.S.-flag vessels at U.S. and foreign ports, and joint ventures.

Note.-- The table reports the contribution of commercial marine fishing to the national economy as measured by margin, value added, and sales. These measures are consistent with the Bureau of the Census definitions.

Margin or mark-up is the difference between the price paid for the product by the consumer or wholesale purchaser and the dockside or wholesale value for an equivalent weight of the product. (It is assumed that fishermen catch their fish without paying purchase price and therefore the entire dockside or exvessel price is considered margin.) Value added is a measure of the factors added to the total worth of a product at each stage of the production process. It is defined as the gross receipts of firms minus the cost of purchased goods and services needed to fabricate the product. Gross National Products (GNP) is equal to the sum of the value added of all economic entities in the economy. Value added within a sector represents that sector's contribution to GNP.

Value added includes wages, salaries, interest, depreciation, rent, taxes and profit. Consumer expenditures are the final retail value of seafood products sold through stores and food service outlets plus secondary wholesale and processing of industrial products.

EMPLOYMENT, CRAFT, AND PLANTS

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ESTIMATED NUMBER OF COMMERCIAL FISHING VESSELS (1) AND FISHING BOATS (2) BY REGION AND STATE, 1990

REGIONS	VESSELS	BOATS	TOTAL
Northeast Fisheries:			
Connecticut.....	135	506	641
Delaware.....	29	342	371
Maine.....	1,721	6,274	7,995
Maryland (3).....	61	4	65
Massachusetts.....	921	4,654	5,575
New Hampshire.....	122	447	569
New Jersey.....	427	1,450	1,877
New York.....	513	3,696	4,209
Rhode Island.....	232	2,689	2,921
Virginia (3).....	248	0	248
South Atlantic and Gulf Fisheries:			
North Carolina.....	1,014	5,271	6,285
South Carolina.....	470	1,140	1,610
Georgia.....	382	356	738
Florida.....	2,500	4,800	7,300
Alabama.....	485	570	1,055
Mississippi.....	720	1,260	1,980
Louisiana.....	4,440	7,000	11,440
Texas.....	2,350	2,900	5,250
West Coast Fisheries:			
Washington.....	2,609	2,627	5,236
Oregon.....	1,491	1,897	3,388
Alaska.....	7,063	10,352	17,415
California.....	3,675	2,921	6,596
Hawaii.....	190	1,200	1,390
Great Lakes Fisheries: (4)			
Illinois.....	0	20	20
Indiana.....	1	3	4
Michigan.....	60	79	139
Minnesota.....	2	27	29
New York.....	2	21	23
Ohio.....	31	22	53
Pennsylvania.....	4	4	8
Wisconsin.....	84	26	110

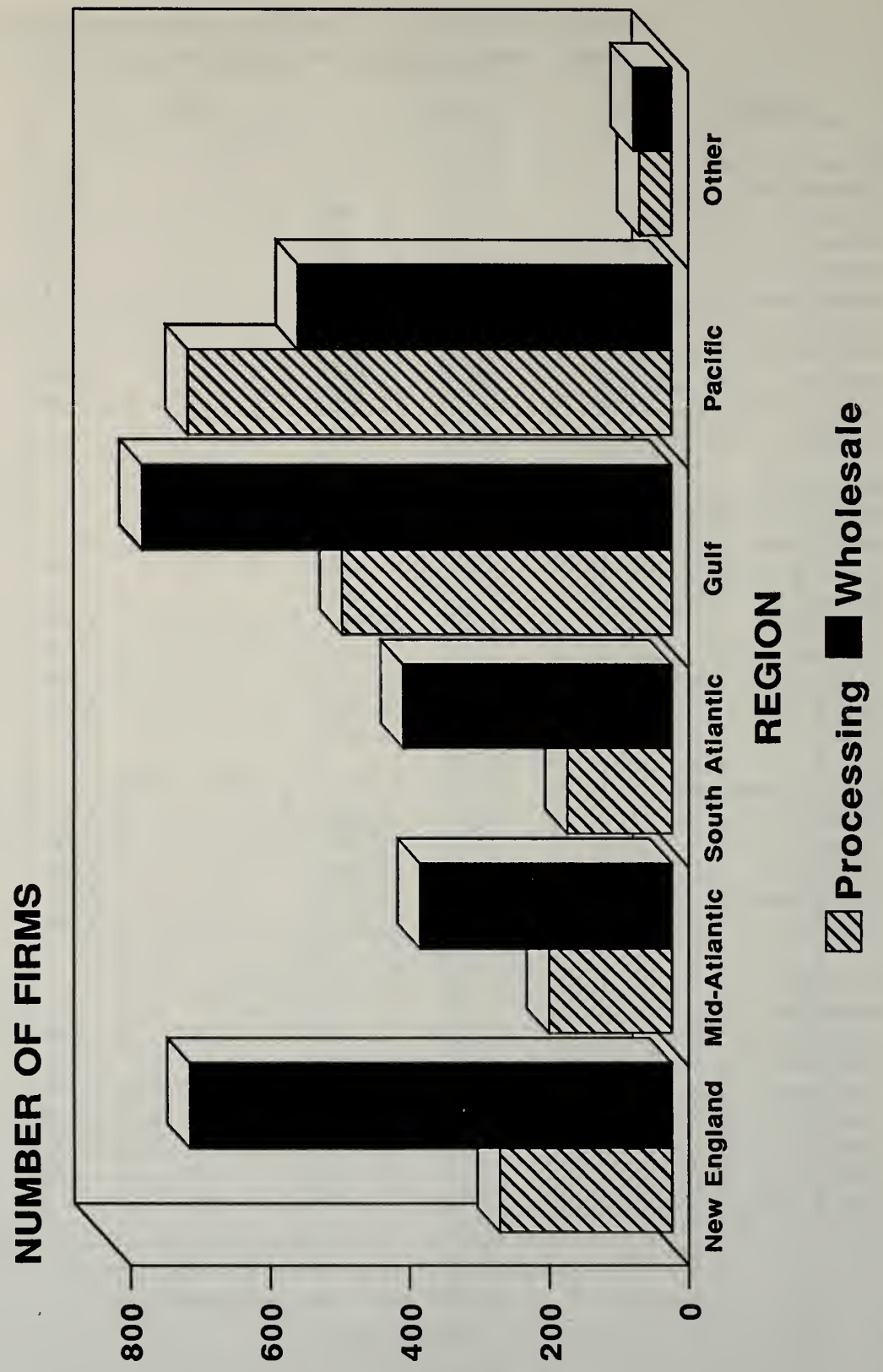
(1) Vessels are documented craft greater than 5 net registered tons.

(2) Boats are craft less than 5 net registered tons.

(3) Only Federal collected data are available.

(4) Commercial fishing fleet sizes for the Great Lakes states represent only the number of licenses issued by the state; therefore, may not be an accurate total. Tribal data are not included in this table.

PROCESSORS AND WHOLESALE DEALERS BY REGION 1990



EMPLOYMENT, CRAFT, AND PLANTS

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PROCESSORS AND WHOLESALERS: PLANTS, AND EMPLOYMENT, 1990

State and area	Processing				Wholesale				Total			
	Plants	Employment		average	Plants	Employment		average	Plants	Employment		average
		Season	Year			Season	Year			Season	Year	

New England:	90	2,016	1,785	829	278	902	829	368	2,918	2,614		
Maine.....	9	246	246	24	4	24	24	13	270	270		
New Hampshire.....	110	3,182	3,140	1,661	273	1,718	1,661	383	4,900	4,801		
Massachusetts.....	33	495	484	308	92	349	308	125	844	792		
Rhode Island.....	5	80	79	238	44	238	238	49	318	317		
Connecticut.....												
Total.....	247	6,019	5,734	3,060	691	3,231	3,060	938	9,250	8,794		
Mid-Atlantic:	26	349	344	829	154	834	829	180	1,183	1,173		
New York.....	17	652	641	323	61	327	323	78	979	964		
New Jersey.....	8	1,384	1,380	189	14	189	189	22	1,573	1,569		
Pennsylvania.....	(1)	(1)	(1)	429	8	429	429	8	429	429		
Delaware.....												
District of Columbia.....	-	-	-	41	4	41	41	4	41	41		
Maryland.....	55	2,055	1,904	578	66	626	578	121	2,681	2,482		
Virginia.....	70	2,437	2,214	298	54	327	298	124	2,764	2,512		
Total.....	176	6,877	6,483	2,687	361	2,773	2,687	537	9,650	9,170		
South Atlantic:	88	1,708	1,539	531	158	582	531	246	2,290	2,070		
North Carolina.....	15	215	197	323	83	405	323	98	620	520		
South Carolina.....	14	1,129	1,127	136	41	138	136	55	1,267	1,263		
Georgia.....												
Florida, East Coast.....	33	1,551	1,541	410	103	423	410	136	1,974	1,951		
Total.....	150	4,603	4,404	1,400	385	1,548	1,400	535	6,151	5,804		
Gulf:	156	3,219	3,210	867	195	886	867	351	4,105	4,077		
Florida, West Coast.....	62	1,505	1,474	68	27	73	68	89	1,578	1,542		
Alabama.....	38	1,685	1,652	123	28	128	123	66	1,813	1,775		
Mississippi.....	185	4,248	3,578	1,556	388	1,945	1,556	573	6,193	5,134		
Louisiana.....	31	1,565	1,325	626	121	640	626	152	2,205	1,951		
Texas.....												
Total.....	472	12,222	11,239	3,240	759	3,672	3,240	1,231	15,894	14,479		
Pacific:	348	13,994	10,021	66	13	129	66	361	14,123	10,087		
Alaska.....	157	4,402	4,219	519	148	565	519	305	4,967	4,738		
Washington.....	43	1,143	1,088	71	37	92	71	80	1,235	1,159		
Oregon.....	145	5,564	5,526	1,741	337	1,781	1,741	482	7,345	7,267		
California.....												
Total.....	693	25,103	20,854	2,397	535	2,567	2,397	1,228	27,670	23,251		
Inland States (2), Total.....	34	529	526	54	14	56	54	48	585	580		
Other Areas or States: (3), Total.....	12	10,136	9,922	227	41	228	227	53	10,364	10,149		
Grand Total.....	1,784	65,489	59,162	13,065	2,786	14,075	13,065	4,570	79,564	72,227		

(1) Included with wholesale. (2) Data covers, Illinois, Indiana, Iowa, Michigan, Minnesota, Missouri, Nevada, Ohio, South Dakota, Wisconsin, and a partial survey conducted for other States. (3) Includes American Samoa, Guam, Hawaii, and Puerto Rico.

FISHERY PRODUCTS INSPECTION

FISHERY PRODUCTS AND ESTABLISHMENTS INSPECTED IN CALENDAR YEAR, 1991

Region	Edible fishery products						
	Establishments (1)		Amount inspected				
	SIFE (2)	PUFI (3)	Grade A (4)	PUFI (4)	No mark (5)	Lot (6)	Total
	<u>-Average number-</u>		<u>-----Thousand pounds-----</u>				
Northeast.....	5	56	43,729	226,137	35,069	162,707	467,642
Southeast.....	0	101	26,753	48,649	59,494	53,295	188,191
West.....	6	68	31,260	65,745	77,721	125,425	300,151
Total, 1991.....	11	225	101,742	340,531	172,284	341,427	955,984
Total, 1990.....	9	213	118,447	267,673	174,548	281,355	842,023

(1) These establishments are inspected under contract and certified as meeting U.S. Department of Commerce (USDC) regulations for construction and maintenance of facilities and equipment, processing techniques, and employment practices.

(2) Fish processing establishments approved for sanitation under the Sanitary Inspected Fish Establishment service (SIFE). Products are not processed under inspection.

(3) Sanitarily inspected fish establishments processing fishery products under USDC inspection.

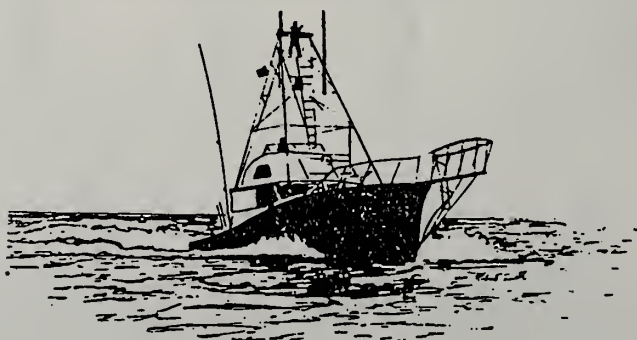
(4) Products processed under USDC inspection in inspected establishments and labeled with USDC inspection mark as "Packed Under Federal Inspection" (PUFI) and/or "U.S. Grade A."

(5) Products processed under inspection in inspected establishments but bearing no USDC inspection mark.

(6) Lot inspected and marked products checked for quality and condition at the time of examination and located in processing plants, warehouses, cold storage facilities, or terminal markets anywhere in the United States.

Note:--Table may not add due to rounding.

Source:--NMFS, Office of Trade and Industry Services, F/TS4.



THE MAGNUSON FISHERY CONSERVATION AND MANAGEMENT ACT

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The Magnuson Fishery Conservation and Management Act (MFCMA), Public Law 94-265 as amended (Magnuson Act), provides for the conservation and management of all fishery resources within the U.S. Exclusive Economic Zone (EEZ). It also provides for fishery management authority over continental shelf resources and anadromous species beyond the EEZ, except when they are found within a foreign nation's territorial sea or fishery conservation zone (or equivalent), to the extent that such sea or zone is recognized by the United States.

The EEZ extends from the seaward boundary of each of the coastal States (generally 3 nautical miles from shore for all but two States) to 200 nautical miles from shore. The seaward boundaries of Texas, Puerto Rico, and the Gulf coast of Florida are 3 marine leagues (9 nautical miles).

GOVERNING INTERNATIONAL FISHERY AGREEMENTS

Under the Magnuson Act, the U.S. Department of State, with cooperation from the National Oceanic and Atmospheric Administration (NOAA) of the U.S. Department of Commerce, negotiates Governing International Fishery Agreements (GIFAs) with foreign countries wishing to fish within the EEZ. After a GIFA is signed, it is transmitted by the President to the Congress for review.

FOREIGN FISHING PERMITS

Vessels of foreign nations which have GIFAs with the United States may fish in the EEZ for species managed under the Magnuson Act after receiving an allocation of that species and a valid fishing permit. After a GIFA is in force, a foreign nation must submit a permit application to the U.S. Department of State for each vessel to fish in the EEZ. Permit applications must also be made for foreign vessels to receive U.S. harvested fish in the EEZ, and to conduct any other operation in the EEZ in support of the catching, taking, or harvesting of fish. The U.S. Department of State provides copies of the applications to the Congress, the U.S. Coast Guard, the appropriate Regional Fishery Management Council, and to the Assistant Administrator for Fisheries of the National Marine

Fisheries Service (NMFS) with its recommendations. The NMFS also receives recommendations from the Regional Fishery Management Councils and the U.S. Coast Guard, as well as the general public.

The Assistant Administrator for Fisheries reviews recommendations bearing on approval of each application and, after consulting with the U.S. Department of State and the U.S. Coast Guard, may approve an application in whole or in part. Any conditions and restrictions on the approval of an application are sent to the foreign nation through the U.S. Department of State, and must be accepted by the nation before a permit is issued.

FEES

Foreign nations engaged in fisheries subject to U.S. jurisdiction are charged permit fees, poundage fees, a foreign fee surcharge, and an observer fee. An incremental fee may also be charged, which is a percentage of the poundage fee from any country found not to be cooperating in the conservation and development of U.S. fishery resources.

The permit fees in 1991 recovered costs of issuing permits, based upon a standard administrative charge of \$354 for each foreign permit application.

Poundage fees are charged for the fish harvested by foreign vessels. Poundage fees vary in relation to the exvessel values of the species harvested by a nation's vessels. Poundage fees are not currently charged for U.S. harvested fish received by foreign vessels. Collections from 1991 poundage fees were expected to continue to decrease as foreign fishing falls to very low levels. Amendment of the Magnuson Act in 1990 withdrew authorization to assess incremental fees.

The surcharge is to capitalize a fund to compensate U.S. fishermen operating in the EEZ whose vessels or gear are lost or damaged because of conflicts with foreign vessels. The surcharge on poundage and permit fees was waived in 1991 because the fund was fully capitalized.

THE MAGNUSON FISHERY CONSERVATION AND MANAGEMENT ACT

The observer fee covers U.S. costs including salary, per diem, transportation, and overhead for U.S. observers on board foreign vessels. The fee is computed on the basis of actual observer trips.

FOREIGN ALLOCATIONS

The total allowable level of foreign fishing (TALFF), if any, for any fishery subject to the exclusive fishery management authority of the United States is that portion of the optimum yield (OY) of such fishery that will not be harvested by vessels of the United States.

Each assessment of OY and each assessment of the anticipated U.S. harvest is reviewed during the fishing season. Adjustments to TALFFs are based on updated information relating to status of stocks, estimated and actual performance of domestic and foreign fleets, and other relevant factors.

FMPs and PMPs

Under the Magnuson Act, eight Regional Fishery Management Councils are charged with preparing Fishery Management Plans (FMPs) for the fisheries needing management within their areas of authority. After the Councils develop FMPs which cover domestic and foreign fishing efforts, the FMPs are submitted to the Secretary of Commerce for approval and implementation. The Department, through NMFS agents and the U.S. Coast Guard, is responsible for enforcing the law and regulations.

The Secretary of Commerce is empowered to prepare plans in the Atlantic and Gulf of Mexico for highly migratory species. Where no FMP exists, Preliminary Fishery Management Plans (PMPs), which only cover foreign fishing efforts, are prepared by the Secretary for each fishery for which a foreign nation requests a permit. The Secretary is also empowered to produce an FMP for any fishery that a Council has not duly produced. In this latter case, the Secretary's FMP covers domestic and foreign fishing.

As of December 31, 1991, five Preliminary Fishery Management Plans (PMPs) were in effect, many of which have been amended since first being implemented.

Foreign Trawl Fisheries of the Northwest
Atlantic
Hake Fisheries of the Northwestern
Atlantic
Pacific Billfishes and Oceanic Sharks
Bering Sea Herring
Bering Sea Snails

The Atlantic swordfish fishery is currently being managed by the Secretary under the Magnuson Act and the Western Atlantic bluefin tuna fishery is managed under the Atlantic tuna Convention Act.

FISHERY MANAGEMENT PLANS (FMPs)

Under section 304 of the Magnuson Act, all Council prepared FMPs must be reviewed by the Secretary of Commerce. After FMPs have been approved under section 304 of the Magnuson Act, they are implemented by federal regulations, under section 305 of the Act. During 1991, two new FMPs were adopted by a Council, submitted for Secretarial review and approved. As of December 31, 1991, there are 32 fishery management plans in place. The FMPs are listed below, and those marked with an asterisk (*) were approved and implemented during 1991. Many FMPs are amended by the Council and submitted for approval under the same Secretarial review process as new FMPs. Many of the FMPs listed have been amended since initial implementation. Those marked with a double asterisk (**) were amended in 1991.

American Lobster
Northeast Multispecies (**)
Atlantic Billfishes
Atlantic Bluefish (*)
Atlantic Coast Red Drum (*)
Atlantic Mackerel, Squid, and Butterfish
Atlantic Salmon
Atlantic Sea Scallops (**)

THE MAGNUSON FISHERY CONSERVATION AND MANAGEMENT ACT

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Atlantic Surf Clams and Ocean Quahogs
fisheries (**)
Summer Flounder (*)
Swordfish
Gulf and South Atlantic Spiny Lobster
Caribbean Shallow Water Reef Fish (**)
Gulf and South Atlantic Corals (**)
Gulf of Mexico Reef Fish (**)
Gulf of Mexico Shrimp (**)
Gulf of Mexico Stone Crab
Coastal Migratory Pelagics (**)
Caribbean Spiny Lobster
Snapper/Grouper (**)
Northern Anchovy
King and Tanner Crab
Commercial and Recreational Salmon
High Seas Salmon (**)

Pacific Groundfish (*)
Gulf of Alaska Groundfish (*)
Bering Sea and Aleutian Islands
Groundfish
Western Pacific Crustaceans (*)
Western Pacific Precious Corals (*)
Western Pacific Bottomfish and Seamount
Groundfish (*)
Gulf of Mexico Red Drum
Western Pacific Pelagics

During 1991, 452 regulatory actions were processed via the Federal Register to implement FMP fishery management actions and rules for foreign fishing. This number includes hearing, meeting, and correction notices.

REGIONAL FISHERY MANAGEMENT COUNCILS

<u>Council</u>	<u>States</u>	<u>Telephone Number</u>	<u>Executive Director</u>
NEW ENGLAND	(Maine, New Hampshire, Massachusetts, Rhode Island, and Connecticut)	617-231-0422	Douglas G. Marshall Suntag Office Park 5 Broadway (Rt. 1) Saugus, MA 01906
MID-ATLANTIC	(New York, New Jersey, Delaware, Pennsylvania, Maryland, and Virginia)	302-674-2331	John C. Bryson Federal Bldg., Rm. 2115 300 So. New St. Dover, DE 19901
SOUTH ATLANTIC	(North Carolina, South Carolina, Georgia, and Florida)	803-571-4366	Robert K. Mahood Southpark Bldg., Suite 306 1 Southpark Circle Charleston, SC 29407
GULF OF MEXICO	(Texas, Louisiana, Mississippi, Alabama, and Florida)	813-228-2815	Wayne E. Swingle Lincoln Center, Suite 881 5401 W. Kennedy Blvd. Tampa, FL 33609
CARIBBEAN	(Virgin Islands and the Commonwealth of Puerto Rico)	809-753-6910	Miguel A. Rolon Banco de Ponce Bldg. Suite 1108 Hato Rey, PR 00918
PACIFIC	(California, Washington, Oregon, and Idaho)	503-326-6352	Lawrence D. Six Metro Center, Suite 420 2000 S.W. First Avenue Portland, OR 97201
NORTH PACIFIC	(Alaska, Washington, and Oregon)	907-271-2809	Clarence G. Pautzke 605 W. 4th Ave., Rm. 306 P.O. Box 103136 Anchorage, AK 99510
WESTERN PACIFIC	(Hawaii, American Samoa, Guam, and the Northern Marianas Islands)	808-523-1368	Kitty M. Simonds 1164 Bishop St., Rm. 1405 Honolulu, HI 96813

OPTIMUM YIELD, DOMESTIC ANNUAL HARVEST, RESERVE, TALFF, AND FOREIGN FISHING ALLOCATIONS:
NORTH ATLANTIC, BY SPECIES AND COUNTRY, 1991 (1)

Item	Loligo squid (2)	Illex squid (2)	Atlantic mackerel (3)	Butter- fish (2)	River herring	Other finfish	Total
-----Metric tons, round weight-----							
Max Optimum yield (OY)....	44,000	30,000	N/A	16,000	8,000	247,000	-
ABC.....	37,000	22,500	330,000	16,000	-	-	-
Initial Optimum yield.....	31,010	18,000	114,000	10,019	8,000	247,000	428,029
DAH.....	31,000	18,000	90,000	10,000	7,800	200,200	357,000
DAP.....	-	15,000	24,000	10,000	7,800	180,000	236,800
JVP.....	-	3,000	54,000	-	-	20,200	77,200
Reserve.....	N/A	N/A	N/A	N/A	-	-	-
TALFF.....	10	-	24,000	19	200	46,800	71,029
<u>Country Allocations</u>							
Netherlands, Total.....	2	-	6,000	-	30	100	6,132
Unallocated.....	8	-	102	17	55	46,400	66,527

(1) OY=Optimum Yield; ABC=Allowable Biological Catch; DAH=Domestic Annual Harvest; and TALFF=Total Allowable Level of Foreign Fishing; Initial Optimum Yield = DAH & TALFF or max optimum yield.

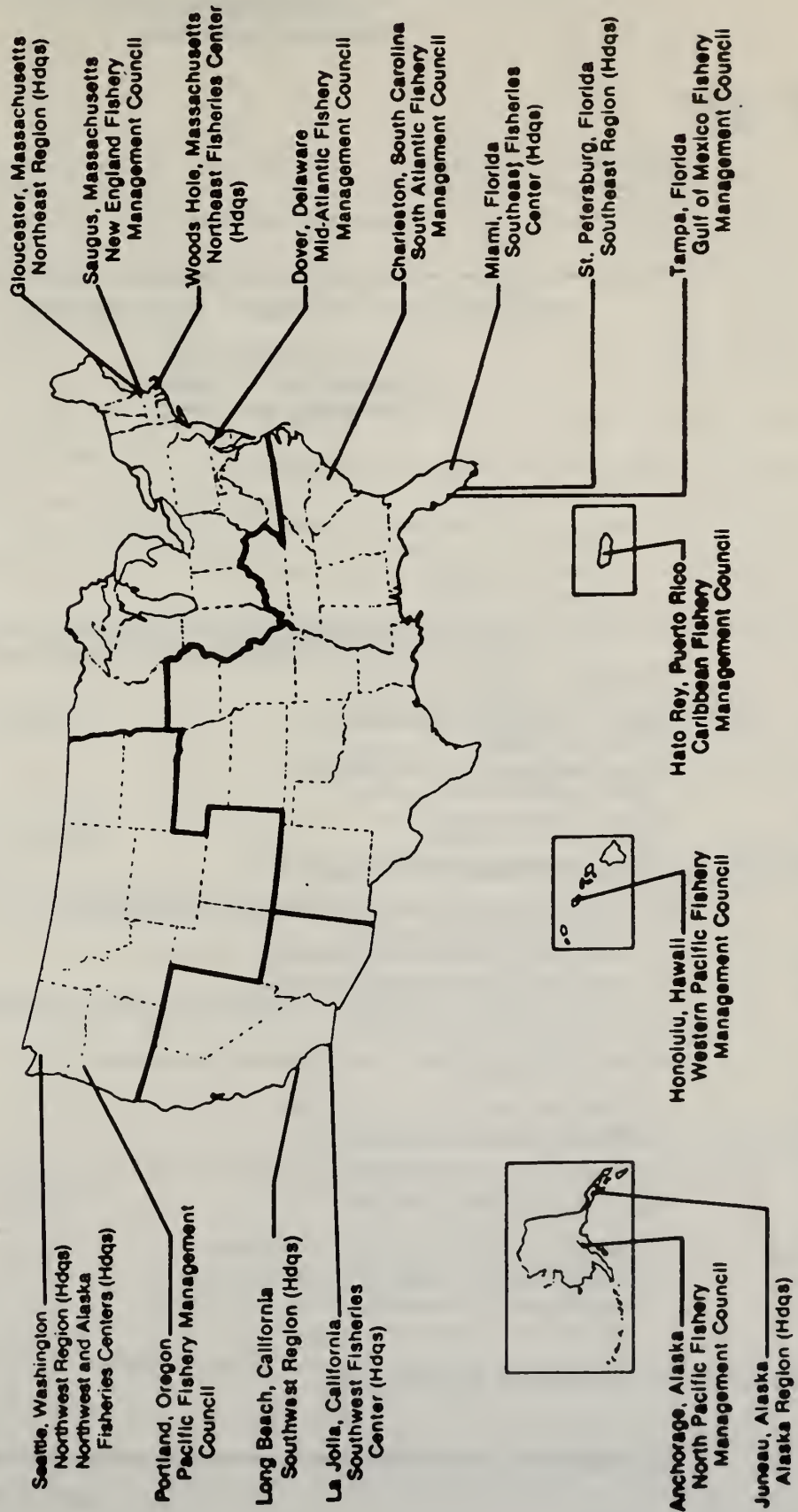
(2) These are the maximum OYs as stated in the FMP; TALFF is for by catch purposes.

(3) DAH includes 14,000 metric tons for recreational catch.

N/A:--Not Applicable.

Source:--NMFS, Office of Trade and Industry Service, F/TS2.

NMFS Regional Offices NMFS Fisheries Centers Regional Fishery Management Councils HDQS Locations



GENERAL ADMINISTRATIVE INFORMATION**UNITED STATES DEPARTMENT OF COMMERCE**

*14th and E Streets, NW
Washington, D.C. 20230*

Mail
routing
codeTelephone
number

--	<i>Secretary of Commerce</i> Barbara Hackman Franklin	202-377-2112
A	<i>Under Secretary for Oceans and Atmosphere</i> John A. Knauss	202-377-3436

NATIONAL MARINE FISHERIES SERVICE

*1335 East-West Highway
(Silver Spring Metro Center #1)
Silver Spring, MD 20910*

F	<i>Assistant Administrator for Fisheries</i> William W. Fox, Jr.	301-713-2239
Fx1	Deputy Assistant Administrator for Fisheries -- Michael F. Tillman	301-713-2239
Fx2	Program Management Officer -- Samuel W. McKeen	301-713-2239
Fx3	Senior Scientist for Fisheries -- Michael P. Sissenwine	301-713-2239
F/MS	Management Services Office James H. Czerwonky	301-713-2245
F/BP	Budget and Planning Office -- John E. Oliver, Jr.	301-713-2250
F/PC	Policy and Coordination Office -- John T. Everett	301-713-2253
F/EN	Office of Enforcement -- Morris M. Pallozzi	301-713-2300
F/EN1	Headquarters Operations Division	301-713-2300
F/CM	Office of Fisheries Conservation and Management -- Richard H. Schaefer	301-713-2334
F/CM1	Operations Support and Analysis Division	301-713-2339
F/CM2	Plans and Regulations Division	301-713-2343
F/CM3	Recreational and Interjurisdictional Fisheries Division	301-713-2347
F/RE	Office of Research and Environmental Information -- Glenn A. Flittner	301-713-2367
F/RE1	Fisheries Statistics Division	301-713-2328
F/RE2	Data Management Division	301-713-2372
F/RE3	Prediction, Analysis and Monitoring Division	301-713-2363
F/PR	Office of Protected Species -- Nancy Foster	301-713-2332
F/PR1	Permits and Documentation Division	301-713-2289
F/PR2	Protected Species Management Division	301-713-2322
F/PR3	Habitat Policy and Conservation Division	301-713-2325
F/PR4	Conservation Science Division	301-713-2319
F/PR5	Habitat Research and Restoration Division	301-713-2319

(Continued)

GENERAL ADMINISTRATIVE INFORMATION

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NATIONAL MARINE FISHERIES SERVICE

Silver Springs, Md. 20910

Mail routing code

Telephone number

F/TS	Office of Trade and Industry Services -- James E. Douglas, Jr.	301-713-2351
F/TS1	Financial Services Division	301-713-2390
F/TS2	Trade Services Division	301-713-2379
F/TS3	Utilization Research and Services Division	301-713-2358
F/TS4	Inspection Service Division	301-713-2355
F/IA	Office of International Affairs -- Henry R. Beasley	301-713-2272
F/IA1	Organizations and Agreements Division	301-713-2276
F/IA2	International Science, Development and Polar Affairs Division	301-713-2288
LA11	Office of Congressional Affairs - Fisheries -- William Price	301-713-2263
PAF	Office of Public Affairs - Fisheries -- Roddy Moscoso	301-713-2370
GCF	Office of General Counsel - Fisheries -- Margaret Hayes	301-713-2231

REFERRAL DIRECTORY - SILVER SPRING, MD OFFICE

FEES AND PERMITS--301-713-2339

Foreign fishing
Joint ventures

FINANCIAL SERVICES--301-713-2390

Compensation for loss of gear
Construction, vessels (Tax Deferral Program)
Insurance - vessel seizure by foreign governments
Loans and loan guarantees

FISHERY MANAGEMENT OPERATIONS--301-713-2343

Artificial reefs
Fishery management plans
Fisheries regulations
State grants

INDUSTRY SERVICES--301-713-2351

Consumer education and marketing
Exports/Imports licenses
Saltonstall-Kennedy (S-K) grants
Tariffs
Trade issues

INTERNATIONAL FISHERIES--301-713-2272

Allocation (foreign fishing catches)
Foreign fisheries (general)

LAW ENFORCEMENT AND FINES--301-713-2300

PROTECTED SPECIES--301-713-2332

Lacey Act (general information)
Marine Mammal Protection Act (general)
Permits and regulations

RESOURCES INVESTIGATIONS--301-713-2367

Acid rain and pollution
Aquaculture information
Diseases of fish
Ecology and fish recruitment
Fishing methods
Resource abundance

STATISTICAL DATA SERVICES--301-713-2328

Commercial fisheries - landings and value
Imports and exports
Joint ventures
Market news reports (general)
Operating units (fishermen and vessels)
Processed fishery products
Recreational fisheries

UTILIZATION RESEARCH--301-713-2358

Botulism and ciguatera poisoning
Nutrition and quality of fishery products
Safety and product standards
Seafood inspection and identity

GENERAL ADMINISTRATIVE INFORMATION

NATIONAL MARINE FISHERIES SERVICE

REGIONAL FACILITIES

<u>Location</u>	<u>Telephone number</u>	
Gloucester, MA	508-281-9300	Northeast Region, One Blackburn Drive Gloucester, MA 01930
Woods Hole, MA	508-548-5123	Northeast Fisheries Science Center Woods Hole, MA 02543
Woods Hole, MA	508-548-5123	Woods Hole Laboratory Woods Hole, MA 02543
Narragansett, RI	401-789-9326	Narragansett Laboratory, 28 Tarzell Drive Narragansett, RI 02882
Milford, CT	203-878-2459	Milford Laboratory Milford, CT 06460
Highlands, NJ	201-872-0200	Sandy Hook Laboratory, P.O. Box 428 Highlands, NJ 07732
Oxford, MD	301-226-5193	Oxford Laboratory Oxford, MD 21654
Gloucester, MA	508-281-3600 Ext. 237	Gloucester Laboratory, Emerson Ave. Gloucester, MA 01930
Washington, DC	202-357-2550	National Systematics Laboratory 10th and Constitution Ave., N.W.
St. Petersburg, FL	813-893-3141	Southeast Region, 9450 Koger Blvd. St. Petersburg, FL 33702
Miami, FL	305-361-4284	Southeast Fisheries Science Center, 75 Virginia Beach Dr. Miami, FL 33149
Miami, FL	305-361-4225	Miami Laboratory, 75 Virginia Beach Dr. Miami, FL 33149
Pascagoula, MS	601-762-4591	Mississippi Laboratories, 3209 Frederick St. P.O. Drawer 1207 Pascagoula, MS 39567
Panama City, FL	904-234-6541	Panama City Laboratory, 3500 Delwood Beach Rd. Panama City, FL 32407
Galveston, TX	409-766-3500	Galveston Laboratory, 4700 Avenue U Galveston, TX 77551

(Continued)

NATIONAL MARINE FISHERIES SERVICE
REGIONAL FACILITIES

<u>Location</u>	<u>Telephone number</u>	
Charleston, SC	803-762-1200	Charleston Laboratory, 217 Fort Johnson Rd. Charleston, SC 29412
Beaufort, NC	919-728-8724	Beaufort Laboratory, Pivers Island Beaufort, NC 28516
Seattle, WA	206-526-6150	Northwest Region, 7600 Sand Point Way, N.E. BIN C15700, Bldg. 1 Seattle, WA 98115
Seattle, WA	206-442-1872	Northwest Fisheries Science Center 2725 Montlake Boulevard, East Seattle, WA 98112
Long Beach, CA	310-980-4001	Southwest Region, 501 West Ocean Blvd. Long Beach, CA 90802
La Jolla, CA	619-546-7000	Southwest Fisheries Science Center 8604 La Jolla Shores Dr., P.O. Box 271 La Jolla, CA 92038
Honolulu, HI	808-943-1221	Honolulu Laboratory, 2570 Dole St., P.O. Box 3830 Honolulu, HI 96812
Tiburon, CA	415-435-3149	Tiburon Laboratory, 3150 Paradise Dr. Tiburon, CA 94920
Monterey, CA	408-646-3311	Pacific Fisheries Environmental Group P.O. Box 831 Monterey, CA 93942
Juneau, AK	907-586-7221	Alaska Region, 9109 Mendenhall Mall Rd. Federal Bldg. Annex, Suite 6, P.O. Box 21668 Juneau, AK 99802
Seattle, WA	206-526-4000	Alaska Fisheries Science Center, 7600 Sand Point Way, N.E. BIN C15700, Bldg. 4 Seattle, WA 98115
Kodiak, AK	907-487-4961	Kodiak Investigations, P.O. Box 1638 Kodiak, AK 99615
Auke Bay, AK	907-789-6000	Auke Bay Laboratory, 11305 Glacier Highway Auke Bay, AK 99801

GENERAL ADMINISTRATIVE INFORMATION

NATIONAL MARINE FISHERIES SERVICE

NATIONAL FISHERY STATISTICS OFFICES

<u>City</u>	<u>Telephone number</u>	<u>Name and address</u>
<u>NORTHEAST REGION</u>		
<u>NEW ENGLAND</u>		
Portland	207-780-3322	Robert C. Morrill or Scott McNamara, Federal Court House, 156 Federal St., Rm. 17, P.O. Box 425, DTS Portland, ME 04101
Rockland	207-594-5969	Peter S. Marckoon, Federal Bldg., 21 Limerock St., Rm. 207, P.O. Box 708, Rockland, ME 04841
Boston	617-223-8012	Louis O'Donnel, 408 Atlantic Ave., Rm. 141, Boston, MA 02210
Boston	617-223-8015	Paul Sheahan, 408 Atlantic Ave., Rm. 141 Boston, MA 02210
Gloucester	508-281-9304	Vito P. Giacalone, Rm. 107, 1 Blackburn Dr. Gloucester, MA 01930
New Bedford	508-999-2452	Dennis E. Main, U.S. Custom House, 2nd and Williams Sts., New Bedford, MA 02740
New Bedford	508-994-9200	Paul O. Swain, Address same as above
Chatham	508-945-5961	Lorraine Spenle, 29C Stage Harbor Road Chatham, MA 02633
(1) Woods Hole	508-548-5123 Ext. 264	Ronnee L. Schultz, Northeast Fisheries Center, Water St., Woods Hole, MA 02543
Newport	401-847-3115	Lori Lathan, Post Office Bldg., Thames St., Newport, RI 02840
Pt. Judith	401-783-7797	Susan Murphy, 310 Great Island Rd., Rm. 203, P.O. Box 547, Pt. Judith, RI 02882
<u>MIDDLE ATLANTIC</u>		
New York	212-620-3404	Russell Meredith, 201 Varick St., Rm. 1145, New York, NY 10014
East Hampton	516-324-3569	Al Usinger, 62 Newtown Lane, Suite 203 East Hampton, NY 11937
Patchogue	516-475-6988	Fred C. Blossom, 50 Maple Ave., P.O. Box 606 Patchogue, L.I., NY 11772
Toms River	908-349-3533	Eugene A. LoVerde, 26 Main St., P.O. Box 143, Toms River, NJ 08754
Cape May	609-884-2113	Walt Makowski, 1382 Lafayette St., P.O. Box 624, Cape May, NJ 08204
<u>CHESAPEAKE</u>		
Oxford	301-226-5420	William E. Brey, Oxford Laboratory, 904 S. Morris St., P.O. Box 338, Oxford, MD 21654
Greenbackville	804-824-4725	George E. Ward, Biological Lab., Franklin City, Greenbackville, VA 23356
Hampton	804-723-3369	Anthony Silvia, 55-57 West Queenway Mall, P.O. Box 436, Hampton, VA 23669
<u>SOUTHEAST REGION</u>		
<u>SOUTH ATLANTIC</u>		
(1) Beaufort	919-728-4168	Kenneth C. Harris, Beaufort Laboratory, 101 Piver Island Road, Beaufort, NC 28516
Manteo	919-473-5929	Glenwood P. Montgomery, Marine Resource Center, P.O. Box 967, Manteo, NC 27954
Charleston	803-762-1200	John C. DeVane, Jr., 217 Ft. Johnson Rd., P.O. Box 12607, James Island, SC 29412
Brunswick	912-265-7080	Richard F. Dumas, Federal Bldg., 801 Gloucester St., Rm. 302, Brunswick, GA 31520
New Smyrna Beach	904-427-6562	Claudia Dennis, 200 Canal St., Room 200 New Smyrna Beach, FL 32168
(1) Miami	305-361-4462	Guy S. Davenport, 75 Virginia Beach Dr., Miami, FL 33149
Tequesta	407-575-4461	Howard C. Schaefer, 19100 S.E. Federal Highway Tequesta, FL 33469

(Continued)

GENERAL ADMINISTRATIVE INFORMATION

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NATIONAL MARINE FISHERIES SERVICE

NATIONAL FISHERY STATISTICS OFFICES

<u>City</u>	<u>Telephone number</u>	<u>Name and address</u>
<u>GULF</u>		
Key West	305-294-1921	Edward J. Little, Jr., Post Office & Custom House Bldg., P.O. Box 269, Key West, FL 33040
Fort Myers	813-334-4364	Tom Herbert, 2000 Main St., Suite 409 Fort Myers, FL 33901
St. Petersburg	813-893-3151	Guy Pizutti, 9450 Koger Blvd., St. Petersburg, FL 33702
Panama City	904-234-6541	Deborah Fable, 3500 Delwood Beach Rd., Panama City, FL 32407
Bayou La Batre	205-824-4149	Horace M. Flowers, D&H Furniture Bldg., Second Floor 93 S. Wintzell Ave., P.O. Box 591, Bayou La Batre, AL 36509
Pascagoula	601-762-4591	Hermes G. Hague, 3209 Frederic St., SEFC Pascagoula Lab., P.O. Box Drawer 1207, Pascagoula, MS 39567
Cameron	318-542-4758	VACANT, South Cameron Medical Center, Route 1, Box 20-F, Creole, LA 70632
Golden Meadow	504-475-7072	Gary J. Rousse, 1614 So. Bayou Dr., Rm. 211, P.O. Box 623, Golden Meadow, LA 70357
Houma	504-872-3321	Kathleen M. Hebert, Post Office Bldg., 425 Lafayette St., Rm. 128, Houma, LA 70360
New Iberia	318-365-1558	Linda F. Picou, 705-A West Admiral Doyle Dr. New Iberia, LA 70560
(1) New Orleans	504-589-6153	Leryes "Lee" Usie, One Canal Place, Suite 2340, 365 Canal Street, New Orleans, LA 70130
Rockport	512-729-0189	Thomas N. Scott, Roy Spears, NMFS - Statistics P.O. Box 2259, Rockport, TX 78382
Brownsville/ Port Isabel	512-548-2516	Kit Doncaster or Edie Lopez, Harbor Masters Bldg., Shrimp Basin, P.O. Box 467, Brownsville, TX 78520
Freeport	409-233-4551	Thomas R. Mauermann, 307 East Park, P.O. Box 2533, Freeport, TX 77541
(1) Galveston	409-766-3705	Margot Hightower or W. Keith Roberts 4700 Avenue U, Bldg. 308, Galveston, TX 77551
Port Arthur	409-727-2271	Donald B. Burton, Federal Bldg., 2875 75th St., Rm. 113, Port Arthur, TX 77640

SOUTHWEST REGION

(1) Long Beach, CA or Honolulu, HI	310-980-4033	Patricia J. Donley, 501 West Ocean Boulevard, P.O. Box 32469, Long Beach, CA 90832
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NORTHWEST REGION

(1) Seattle	206-526-6128	John K. Bishop, 7600 Sand Point Way, N.E., Bldg., 1, BIN C15700, Seattle, WA 98115
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ALASKA REGION

(1) Juneau	907-586-7221	Jessica A. Gharrett, 9109 Mendenhall Mall Road, Federal Building Annex Suite 6, P.O. Box 21668, Juneau, AK 99802
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(1) Regional or area headquarters for statistics offices.

LIBRARY INFORMATION

The NOAA Library and Information Network Catalog (NOAALINC) is a CD-ROM microcomputer-based library catalog of more than one million books, technical reports, serials and microforms. The collection strengths include aquatic science, marine ecology, microbiology, oceanography, meteorology, climatology, chemistry, geology, remote sensing, hazardous wastes, pesticides, toxicology, pollution, and law.

NOAALINC is made by The Library Corporation located in Inwood, West Virginia. The system implements a keyword searching strategy to locate information by author, title, subject, and call number. Records can be displayed using several display formats; brief, labeled, and full. Each bibliographic record indicates which library holds the item. NOAA personnel may borrow items by contacting the nearest NOAA Library or the NOAA Central Library at (301) 443-8330 or

FAX (303) 443-0237 or NOAA.LIBRARY (OMNET). EPA personnel should contact their servicing EPA library. The general public should contact their local library.

The NOAALINC is available to anyone, without any restriction, twenty-four hours a day, every day of the year. No account is required. To access using ANSI emulation, dial (301) 770-7375 or 1-(800)-352-7281. At the "USER ID" prompt, enter ANSI. To quit, use your software communications exit procedure.

The NOAALINC workstations are also available to individuals who come into the NOAA and EPA libraries and information centers. A listing of the locations is available at your NOAA or EPA library.

Other library information is available from NOAA's library, 6009 Executive Blvd., Rockville, MD 20852. Telephone: 301-443-8330

PUBLICATIONS AVAILABLE FROM U.S. GOVERNMENT PRINTING OFFICE**TECHNICAL REPORTS****Stock Number**

003-0009-00522-1: International Trade Administration Report, "1989 U.S. Industrial Outlook" - a one-year forecast on the U.S. Fishing Industry plus one and five-year forecasts on other U.S. Industries
...\$24.00

STATISTICAL REPORTS

003-020-00161-1 Fisheries of the United States, 1990
...\$6.50

MISCELLANEOUS REPORTS

003-009-00547-7 United States Industrial Outlook 1989: Prospects or Industries
...\$24.00

MARINE LIFE POSTERS

(printed on washable non-glare plasticized paper)

003-020-00055-0 Marine Fishes of the California Current and adjacent waters
...\$5.50

003-020-00069-0 Fishes of the Great Lakes
...\$8.00

To purchase publications listed above (Advance Payment Required), call or write:

**Superintendent of Documents
U.S. Government Printing Office
Washington, DC 20202
202-783-3238**

PUBLICATIONS AVAILABLE FROM NATIONAL MARINE FISHERIES SERVICE AND
NATIONAL TECHNICAL INFORMATION SERVICE (NTIS)
U.S. DEPARTMENT OF COMMERCE

SCIENTIFIC PUBLICATIONS:

Information on formal scientific publications by NMFS (such as NMFS journals and technical publications) may be obtained from the Scientific Publications Office (F/NWR1), 7600 Sand Point Way, N.E., BIN C-15700, Seattle, WA 98115.
Telephone: 206-526-6107

CURRENT FISHERY STATISTICS (CFS) SERIES:

The reports listed below are in the Current Fishery Statistics (CFS) series. They are statistical bulletins on marine recreational fishing, commercial fishing, and on the manufacture and commerce of fishery products. For further information or to obtain a subscription to these publications, contact the office shown below:

NOAA, National Marine Fisheries Service
Fisheries Statistics Division (F/RE1)
1335 East-West Highway, Room 8313
Silver Spring, MD 20910
Telephone: 301-713-2328

Marine recreational fishing publications are released annually. If you wish a copy of the following publications, check the designated space () and return to the Office shown above.

- () Marine Recreational Fishery Statistics Survey, Atlantic and Gulf Coasts, 1987-1989, C.F.S. No. 8904
- () Marine Recreational Fishery Statistics Survey, Pacific Coast, 1986, C.F.S. No. 8393
- () Marine Recreational Fishery Statistics Survey, Atlantic and Gulf Coasts, 1986, C.F.S. No. 8392
- () Marine Recreational Fishery Statistics Survey, Atlantic and Gulf Coasts, 1983-1984, C.F.S. No. 8326
- () Marine Recreational Fishery Statistics Survey, Pacific Coast, 1983-1984, C.F.S. No. 8325

- () Marine Recreational Fishery Statistics Survey, Pacific Coast, 1981-1982, C.F.S. No. 8323
- () Marine Recreational Fishery Statistics Survey, Atlantic and Gulf Coasts, 1979 (Revised)-1980, C.F.S. No. 8322
- () Marine Recreational Fishery Statistics Survey, Pacific Coast, 1979-1980, C.F.S. No. 8321

The bulletins shown below cover freezings and holdings, the production of various processed products, and the U.S. foreign trade in fishery products. The following are available annually:

- () FF - Frozen Fishery Products
- () MF - Processed Fishery Products
- () Imports and Exports of Fishery Products

The following publication is only available quarterly.

- () Fish Meal and Oil

OTHER PUBLICATIONS:

All publications listed below may be obtained from NTIS (see page 102) or the originating office (code follows in parenthesis). Copies are available only as long as supply lasts.

- () Endangered Species Act, Biennial Report, Status of Recovery Program, FY 1989-1991 (F/PR)
- () Magnuson Fishery Conservation and Management Act, As Amended through November 28, 1990 (F/CM)
- () Marine Mammal Protection Act, Annual Report (F/PR)
- () Our Living Oceans - The First Annual Report on the Status of U.S. Living Marine Resources (F/RE)

PUBLICATIONS

- () Strategic Plan of the National Marine Fisheries Service (F)
- () The Staltonstall-Kennedy Grant Program: Fisheries Research and Development (F/TS)
- () The Staltonstall-Kennedy Grant Program: Fisheries Research and Development -- Annotated Bibliography (F/TS)
- () USDC Approved List of Fish Establishments and Products -- Semi-Annual Report (National Seafood Inspection Laboratory, Pascagoula, MS)

Aquaculture and Capture Fisheries: Impacts In U.S. Seafood Markets (NTIS No. PB-88-204185/GBA)

Developments of Value Added, Margin and Expenditures for Marine Fishery Products (NTIS No. PB-89-125108)

Processors and Wholesale Dealers of Fishery Products in the United States, 1989 (Shows firms name, address, and major products) (NTIS No. PB-91-129429)

Revenues, Costs, and Returns from Vessel Operation in Major U.S. Fisheries (NTIS No. PB-265275)

Seafood Plant Sanitation (NTIS No. PB-271161)

Fisheries Statistics of the United States (Statistical Digest) is a final report on the Nation's commercial fisheries showing more detail than *Fisheries of the United States*.

Year	Accession No.	Year	Accession No.
1939	COM-75-11265	1959	COM-75-11062
1940	COM-75-11266	1960	COM-75-11063
1941	COM-75-11267	1961	COM-75-11064
1942	COM-75-11268	1962	COM-75-11065
1943	COM-75-11269	1963	COM-75-11066
1944	COM-75-11270	1964	COM-75-11067
1945	COM-75-11271	1965	COM-75-11068
1946	COM-75-11272	1966	PB-246429
1947	COM-75-11273	1967	PB-246430
1948	COM-75-11274	1968	COM-72-50249
1948	COM-75-11275	1969	COM-75-10887
1950	COM-75-11056	1970	COM-75-10643
1951	COM-75-11053	1971	COM-74-51227
1952	COM-75-11054	1972	COM-75-11430
1953	COM-75-11055	1973	PB-262058
1954	COM-75-11057	1974	PB-277796
1955	COM-75-11058	1975	PB-300625
1956	COM-75-11059	1976	PB-81-163438
1957	COM-75-11060	1977	PB-84-192038
1958	COM-75-11061		

COMMERCIAL FISHERIES

Fisheries of the United States is a preliminary report with historical comparisons on the Nation's fishing, fish processing, and foreign trade in fishery products. The following reports are available through NTIS (address and phone number listed on page 102).

Year	Accession No.	Year	Accession No.
1966	COM-75-10662	1979	PB-80-201593
1967	COM-75-10663	1980	PB-81-201593
1968	COM-75-10664	1981	PB-82-215542
1969	COM-75-10665	1982	PB-83-216473
1970	COM-71-50081	1983	PB-84-195148
1971	COM-75-10666	1984	PB-84-195148
1972	COM-73-50644	1985	PB-87-143145
1973	COM-74-50546	1986	PB-88-164132
1974	COM-75-10862	1987	PB-88-215173
1975	PB-253966	1988	PB-89-216485
1976	PB-268662	1989	PB-91-129320
1977	PB-282741	1990	PB-92-174523/AS
1978	PB-297083		

STATE LANDINGS

Maine: 1946-76, PB-271-296; 1977-79, PB-128258.
 Massachusetts: 1943-76, PB-275866; 1977-79, PB-81-143182.
 Rhode Island: 1954-77, PB-287627; 1978-79, PB-81-157158.
 New York: 1954-76, PB-275449; 1977-79, PB-81-134546.
 New Jersey: 1952-76, PB-275696; 1977-79, PB-81-159048.
 Maryland: 1960-76, PB-300636; 1977-79, PB-81-159003.
 Virginia: 1960-76, PB-300637; 1977-79, PB-82-151960.
 North Carolina: 1955-76, PB-288928; 1977-79, PB-82-151978.
 South Carolina: 1957-76, PB-289405; 1977-79, PB-81-163198.
 Georgia: 1956-77, PB-289814; 1977-79, PB-81-157166.
 Florida: 1950-76, PB-292068.
 Alabama: 1950-77, PB-80-121262; 1978, PB-82-168071.
 Mississippi: 1951-77, PB-80-121270; 1978, PB-82-169079.

Louisiana: 1957-77, PB-300583; 1978, PB-82-168063.
 Texas: 1949-77, PB-300603; 1978-79, PB-82-169004.
 Shrimp Landings: 1956-76, PB-80-124696; 1978-79, PB-82-156183.
 Gulf Coast Shrimp Data: 1958-76, PB-80-126899; 1978-79, PB-82-170390.

PROCESSED FISHERY PRODUCTS -- ANNUAL SUMMARY

1979	PB-89-215248/AS	1984	PB-89-215297/AS
1980	PB-89-215255/AS	1985	PB-89-215305/AS
1981	PB-89-215263/AS	1986	PB-89-215313/AS
1982	PB-89-215289/AS	1987	PB-92-172956
1983	PB-89-215271/AS		

MARINE RECREATIONAL FISHING

1970 Salt-Water Angling Survey, PB-265416.

Determination of the Number of Commercial and Non-Commercial Recreational Boats in the United States, Their Use, and Selected Characteristics, COM-74-11186.

Participation in Marine Fishing:

Northeastern United States, 1973-74, COM-75-10655.
 Southeastern United States, 1974, PB-273160.

MARINE RECREATIONAL FISHERY STATISTICS SURVEY:

Atlantic and Gulf Coasts:

1979-80	PB-84-199652
1979 (Revised)-1980	PB-89-102552
1981-1982	PB-89-102560
1983-1984	PB-89-102628
1985	PB-89-102669
1986	PB-89-102701
1987-1989	PB-92-174820

Pacific Coast:

1981-1982	PB-89-102925/AS
1983-1984	PB-89-102933/AS
1985	PB-89-102941/AS
1986	PB-89-102958/AS

NORTHEAST FISHERIES SCIENCE CENTER

106-Mile Site Characterization Update. By John B. Pearce, Don C. Miller, and Carl Berman, eds. August 1983. xxd + 483 p., 180 figs., 32 tables, 1 app. (NTIS No. PB-84-118363).

A Plan for Study: Response of the Habitat and Biota of the Inner New York Bight to Abatement of Sewage Sludge Dumping. By Environmental Processes Division. June 1988. iii + 34 p., 5 figs., 3 tables, 4 app. (NTIS No. PB-89-100903/AS).

A summary of the symposium on rockfishes and recommendations for future research. Boehlert, George W., Milton S. Love, J. P. Wourms, and Juro Yamada. 1991. Environ. Biol. Fish. 30(1-2):273-280.

Allocation of Statewide-Reported MRFSS Catch and Landings Statistics between Areas: Application to Winter Flounder. By Frank P. Almelda. September 1989. v + 18 p., 5 figs., 6 tables, 2 app. (NTIS No. PB-90-246745).

An Analysis and Evaluation of Ichthyoplankton Survey Data from the Northeast Continental Shelf Ecosystems. By Wallace G. Smith, ed. August 1988. xiii + 132 p., 53 figs., 12 tables, 1 app. (NTIS No. PB-89-122501/AS).

An Annotated List of the Fishes of Massachusetts Bay. By Bruce B. Collette and Karsten E. Hartel. February 1988. x + 70 p., 1 fig., 1 table. (NTIS No. PB-88-179247/AS).

An Evaluation of the Bottom Trawl Survey Program of the Northeast Fisheries Center. By Survey Working Group. March 1988. ix + 83 p., 33 figs., 13 tables. (NTIS No. PB-88-201983/AS).

An Indexed Bibliography of Northeast Fisheries Center Publications and Reports for 1987. By Jon A. Gibson. August 1988. iii + 20 p. (NTIS No. PB-89-113013/AS).

An Indexed Bibliography of Northeast Fisheries Center Publications and Reports for 1988. By Jon A. Gibson. December 1989. iii + 32 p. (NTIS No. PB-91-112912).

Annual NEMP Report on the Health of the Northeast Coastal Waters of the United States, 1980. Northeast Monitoring Program Report No. NEMP IV 81 A-H0043. August 1981. Revised and reprinted January 1982. xxi + 79 p., 23 figs., 4 tables, 5 app. (NTIS No. PB-82-124587).

Annual NEMP Report on the Health of the Northeast Coastal Waters of the United States, 1981. Northeast Monitoring Program Report No. NEMP-IV-82-65. February 1983. xii + 86 p., 21 figs., 15 tables, 1 app. (NTIS No. PB-83-193912).

Annual NEMP Report on the Health of the Northeast Coastal Waters, 1982. By John B. Pearce, Carl R. Berman, and Marlene R. Rosen, eds., and Robert N. Reid (benthos), Catherine E. Warsh (water quality), and

Edith Gould (biological effects), topic coords. January 1985. xi + 68 p., 29 figs., 5 tables. (NTIS No. PB-85-219129/AS).

Calculation of Standing Stocks and Energetic Requirements of the Cetaceans of the Northeast United States Outer Continental Shelf. By Robert D. Kenney, Martin A.M. Hyman, and Howard E. Winn. May 1985. iv + 99 p., 1 fig., 5 tables, 1 app. (NTIS No. PB-85-239937/AS).

Characterization of the Middle Atlantic Water Management Unit of the Northeast Regional Action Plan. By Anthony L. Pacheco, ed. July 1988. v + 322 p., 136 figs., 21 tables. (NTIS No. PB-89-145262/AS).

Contaminants in Hudson-Raritan Estuary Water and Influence of Cold Storage upon Its Chemical Composition. By Anthony Calabrese, Lawrence J. Buckley, and J. Christopher Powell, May 1988. vii + 37 p., 10 figs., 11 tables. (NTIS No. PB-88-225628/AS).

Contaminants in New York Bight and Long Island Sediments and Demersal Species, and Contaminant Effects on Benthos, Summer 1980. By Robert N. Reid, John E. O'Reilly, and Vincent S. Zdanowicz, eds. September 1982. x + 96 p., 36 figs., 21 tables. (NTIS No. PB-83-152116).

Contaminants in Sediment and Fish Tissue from Estuarine and Coastal Sites of the Northeastern United States: Data Summary for the Baseline Phase of the National Status and Trends Program Benthic Surveillance Project, 1984-1986. By Vincent S. Zdanowicz and Donald F. Gadbois. December 1990. x + 138 p., 67 figs., 21 tables (F/NEC).

Definition of Management Units. By Emory D. Anderson and Guy D. Marchesseault. October 1980. v + 4 p., *4 figs., 1 table. (NTIS No. PB-81-200016).

Distribution of Sexually Immature Components of 10 Northwest Atlantic Groundfish Species Based on Northeast Fisheries Center Bottom Trawl Surveys, 1968-1986. By Susan E. Wigley and Wendy L. Gabriel. January 1991. iv + 17 p., 23 figs., 3 tables. (NTIS No. PB-92-101617).

Economic and Biological Data Needs for Fisheries Management, with Particular Reference to the New England and Mid-Atlantic Areas. By Guy D. Marchesseault, Joseph J. Mueller, and Ivar E. Strand, Jr. December 1980. v + 10 p., 1 fig., 3 tables. (NTIS No. PB-81-200008).

Ecosystem Definition and Community Structure of the Macrobenthos of the NEMP Monitoring Station at Pigeon Hill in the Gulf of Maine. By Alan W. Hulbert, Kenneth J. Pecol, Jonathan D. Witman, Larry G. Harris, James R. Sears, and Richard A. Cooper. May 1982. xii + 143 p., 16 figs., 10 tables, 9 app. (NTIS No. PB-83-112474).

Environmental Benchmark Studies in Casco Bay--Portland Harbor, Maine, April 1980. By Peter F. Larsen, Anne C. Johnson, and Lee F. Doggett. January 1983. xi + 173 p., 39 figs., 12 tables, 2 app. (NTIS No. PB-83-184069).

Epizootic Ulcerative Syndromes in Coastal/Estuarine Fish. By Carl J. Sindermann. June 1988. v + 37 p., 8 figs., 1 table. (NTIS No. PB-89-110803/AS).

Evidence of Nearshore Summer Upwelling Off Atlantic City, New Jersey. By Merton C. Ingham and James Eberwine. November 1984. iii + 10 p., 5 figs. (NTIS No. PB-85-150290).

Factors Influencing Spring Distribution, Availability, and Recreational Catch of Atlantic Mackerel (*Scomber scombrus*) in the Middle Atlantic and Southern New England Regions. By William J. Overholtz, Reed S. Armstrong, David G. Mountain, and Mark Tercelro. August 1991. iii + 13 p., 9 figs., 3 tables (F/NEC).

Finfish Maturity Sampling and Classification Schemes Used during Northeast Fisheries Center Bottom Trawl Surveys, 1963-89. By Jay Burnett, Loretta O'Brien, Ralph K. Mayo, Jeffrey A. Darde, and Margot L. Bohan. December 1989. iii + 14 p., 11 tables, 1 app. (NTIS No. PB-91-128389/AS).

Fish as Sentinels of Environmental Health. By Robert A. Murchelano. September 1988. iii + 16 p., 4 figs. (NTIS No. PB-89-139737/AS).

Fishery Management Techniques, A Review. By Michael P. Sissenwine and James E. Kirkley. October 1980. v + 10 p. (NTIS No. PB-81-198780).

Food and Distribution of Juveniles of Seventeen Northwest Atlantic Fish Species, 1973-1976. By Ray E. Bowman, Thomas R. Azarovitz, Esther S. Howard, and Brian P. Hayden. May 1987. xi + 57 p., 10 figs., 19 tables. (NTIS Access. No. PB-87-215851/AS).

Food of Seventeen Species of Northwest Atlantic Fish. By Ray E. Bowman and William L. Michaels. January 1984. xx + 183 p., 2 figs., 61 tables, 19 app. (NTIS No. PB-84-219195).

Growth and Survival of Larval Fishes in Relation to the Trophodynamics of Georges Bank Cod and Haddock. By Geoffrey C. Laurence and R. Gregory Lough. January 1985. xvi + 150 p., 67 figs., 15 tables, 1 app. (NTIS No. PB-85-220093/AS).

Guidelines for Estimating Lengths at Age for 18 Northwest Atlantic Finfish and Shellfish Species. By Judith A. Penttila, Gary A. Nelson, and John M. Burnett, III. May 1989. III + 39 p., 18 figs., 19 tables. (NTIS No. PB-90-120675/AS).

Gulf and Atlantic Survey for Selected Organic Pollutants in Finfish. By Paul D. Boehm and Pam Hirtzer. April 1982. vii + 111 p., 46 figs., 31 tables, 2 app. (NTIS No. PB-82-254111).

Histological Techniques for Marine Bivalve Mollusks. By Dorothy W. Howard and Cecella S. Smith. June 1983. x + 97 p., 88 figs., 9 tables, 1 app. (NTIS No. PB-86-136611/AS).

History and Status of the Atlantic Demersal Finfish Fishery Management Plan. By Guy D. Marchesseault, Richard P. Ruals, and DerHslung Wang. October 1980. x + 8 p., 5 figs., 2 tables. (NTIS No. PB-81-199515).

Indexed Bibliography of the Bay Scallop (*Argopecten irradians*). By Barbara D. Sabo (Gibson) and Edwin W. Rhodes. May 1987. III + 85 p. (NTIS No. PB-87-231411/AS).

Indexing the Economic Health of the U.S. Fishing Industry's Harvesting Sector. By Virgil J. Norton, Morton M. Miller, and Elizabeth Kenney. May 1985. v + 42 p., 44 figs., 25 tables, 1 app. (NTIS No. PB-85-217958/AS).

Influence of Freshwater Inflows on Estuarine Productivity. By James G. Turek, Timothy E. Goodger, Thomas E. Bigford, and John S. Nichols. May 1987. III + 26 p. (NTIS No. PB87-213666/AS).

MARMAP Plankton Survey Manual. By Jack W. Joss and Robert R. Marak. March 1983. xvii + 260 p., 41 figs., 3 tables, 2 app. (NTIS No. PB-83-210203).

MARMAP Surveys of the Continental Shelf from Cape Hatteras, North Carolina, to Cape Sable, Nova Scotia (1977-1983). Atlas No. 1. Summary of Operations. By John D. Sibunka and Myron J. Silverman. November 1984. vii + 306 p., 52 figs., 2 tables. (NTIS No. PB-85-150985/AS).

MARMAP Surveys of the Continental Shelf from Cape Hatteras, North Carolina, to Cape Sable, Nova Scotia

(1977-1984). Atlas No. 2. Annual Distribution Patterns of Fish Larvae. By Wallace W. Morse, Michael P. Fahay, and Wallace G. Smith. May 1987. viii + 215 p., 27 figs., 2 tables. (NTIS No. PB-87-232831/AS).

MARMAP Surveys of the Continental Shelf from Cape Hatteras, North Carolina, to Cape Sable, Nova Scotia (1984-87). Atlas No. 3. Summary of Operations. By John D. Sibunka and Myron J. Silverman. July 1989. iv + 197 p., 36 figs., 2 tables. (NTIS No. PB-90-160656/AS).

Methodology for Identification and Analysis of Fishery Management Options. By Brian J. Rothschild, Richard C. Hennemuth, Jacob J. Dykstra, Leo C. Murphy, Jr., John C. Bryson, and James D. Ackert. December 1980. v + 10 p., 5 figs., 1 app. (NTIS No. PB-81-200834).

Nantucket Shoals Flux Experiment Data Report 1. Hydrography. By W. Redwood Wright. June 1983. I + 105 p., 100 figs., 1 table. (NTIS No. PB-83-236562).

NOAA's Northeast Monitoring Program (NEMP): A Report on Progress of the First Five Years (1979-84) and a Plan for the Future. By Robert N. Reid, Merton C. Ingham, and John B. Pearce, eds., and Catherine E. Warsh (water quality), Robert N. Reid (sediments & bottom organisms), Adriana Y. Cantillo (trace contaminants in tissues), and Edith Gould (biological effects), topic coords. May 1987. xl + 138 p., 13 figs., 1 table, 9 app. (NTIS No. PB-87-210100).

Northeast Fisheries Center Framework for Inshore Research. By Research Planning & Coordination Staff. July 1987. vi + 44 p., 2 figs., 2 tables. (NTIS No. PB-87-232286/AS).

Oceanology: Biology of the Ocean. Volume 2. Biological Productivity of the Ocean. By M.E. Vinogradov, editor in chief. First printed by Nauka Press, Moscow, 1977. Translated from the Russian by Albert L. Peabody. January 1985. x + 518 p., 81 figs., 59 tables. (NTIS No. PB-85-204683/AS).

Overview Document of the Northeast Fishery Management Task Force, Phase I. By Richard C. Hennemuth, Brian J. Rothschild, Lee G. Anderson, and William A. Lund, Jr. October 1980. v + 12 p., 2 figs. (NTIS No. PB-81-202343).

Pelagic Distributions of Marine Birds Off the Northeastern United States. By Kevin D. Powers. November 1983. xvi + 201 p., 116 figs., 5 tables, 9 app. (NTIS No. PB-84-187871).

Proceedings of the Summer Flounder (*Paralichthys dentatus*) Age and Growth Workshop, 2/0-21 May 1980. Woods Hole, Massachusetts. By Ronald W. Smith, Louise M. Dery, Paul G. Scarlett, and Ambrose Jearld, Jr. December 1981. iv + 14 p., 10 figs., 6 tables. (NTIS No. PB-82-174921).

Phytoplankton Community Structure in Northeastern Coastal Waters of the United States. I. October 1978. By Harold G. Marshall and Myra S. Cohn. August 1981. Revised and reprinted October 1981. v + 14 p., 4 figs., 1 app. (NTIS No. PB-82-124561).

Phytoplankton Community Structure in Northeastern Coastal Waters of the United States. II. November 1978. By Harold G. Marshall and Myra S. Cohn. August 1981. Revised and reprinted October 1981. v + 14 p., 3 figs., 1 app. (NTIS No. PB-82-124579).

Recent Estimates of Adult Spawning Stock Biomass Off the Northeastern United States from MARMAP Ichthyoplankton Surveys. By Peter Berrien, Wallace Morse, and Michael Pennington. July 1984. ix + 111 p., 25 figs., 25 tables. (NTIS No. PB-85-108991).

Regional Action Plan. By Bruce E. Higgins, Ruth Rehfus, John B. Pearce, Robert J. Pawlowski, Robert L. Lippson, Timothy Goodger, Susan Mello Roe, and Douglas W. Beach. April 1985. ix + 84 p., 4 figs., 6 tables, 9 app. (NTIS No. PB-85-219962/AS).

Residual Drift and Residence Time of Georges Bank Surface Waters with Reference to the Distribution, Transport, and Survival of Larval Fishes. By John B. Colton, Jr., and Jacquelyn L. Anderson. June 1983. ix + 45 p., 22 figs., 2 tables, 1 app. (NTIS No. PB-84-107820).

Response of the Habitat and Biota of the Inner New York Bight to Abatement of Sewage Sludge Dumping. Second Annual Progress Report--1988. By Environmental Processes Division. July 1989. vii + 47 p., 39 figs., 11 tables, 3 app. (NTIS No. PB-90-125444/AS).

Response of the Habitat and Biota of the Inner New York Bight to Abatement of Sewage Sludge Dumping: Third Annual Progress Report--1989. By Anne L. Studholme, Merton C. Ingham, and Anthony Pacheco, eds. February 1991. vi + 57 p., 74 figs., 20 tables, 1 app. (NTIS No. PB-91-208199).

Seasonal Distribution Patterns of Commercial Landings of 45 Species off the Northeastern United States during 1977-88. By Sukwoo Chang. October 1990. v + 130 p., 246 figs. (NTIS No. PB-91-160846).

Seasonal Phytoplankton Assemblages in Northeastern Coastal Waters of the United States. By Harold G. Marshall and Myra S. Cohn. July 1982. vi + 31 p., 8 figs., 2 tables. (NTIS No. PB-83-116715).

Secondary Production of Benthic Macrofauna at Three Stations of Delaware Bay and Coastal Delaware. By Stavros Howe and Wayne Leathem. November 1984. ix + 62 p., 6 figs., 19 tables. (NTIS No. PB-85-145753/AS).

Shell Disease of Crustaceans in the New York Bight. By C.J. Sindermann (chair), F. Csulak (EPA coord.), T.K. Sawyer (rapp.), R.A. Bulls, D.W. Engel, B.T. Estrella, E.J. Noga, J.B. Pearce, J.C. Rugg, R. Runyon, J.A. Tiedemann, and R.R. Young. December 1989. vii + 47 p., 7 figs., 4 tables, 4 app. (NTIS No. PB-90-195058/AS).

Shell Disease among Red Crabs Inhabiting Submarine Canyons of the New York Bight. By Randall R. Young. December 1989. iii + 9 p., 18 figs., 5 tables. (NTIS No. PB-90-194762/AS).

Status of the Marine Fishery Resources off the Northeastern United States. By Margaret M. McBride and Bradford E. Brown. December 1980. vii + 13 p., 4 figs., 3 tables. (NTIS No. PB-81-199903).

Status of the Fishery Resources Off the Northeastern United States for 1981. By Resource Assessment Division. January 1982. iii + 114 p., 44 figs., 44 tables. (NTIS No. PB-82-184946).

Status of the Fishery Resources Off the Northeastern United States for 1982. By Resource Assessment Division. June 1983. iii + 128 p., 44 figs., 44 tables. (NTIS No. PB-83-236554).

Status of the Fishery Resources Off the Northeastern United States for 1983. By Resource Assessment Division. Emory D. Anderson, ed. July 1984. iii + 132 p., 44 figs., 48 tables. (NTIS No. PB-85-106847).

Status of the Fishery Resources Off the Northeastern United States for 1985. By Conservation & Utilization Division. August 1985. iii + 137 p., 46 figs., 49 tables. (NTIS No. PB-86-125473/AS).

Status of the Fishery Resources Off the Northeastern United States for 1986. By Conservation & Utilization Division. September 1986. iii + 130 p., 45 figs., 48 tables. (NTIS No. PB-87-122115/AS).

Status of the Fishery Resources Off the Northeastern United States for 1987. By Conservation & Utilization

Division. October 1987. III + 132 p., 47 figs., 51 tables. (NTIS No. PB-88-148549).

Status of the Fishery Resources Off the Northeastern United States for 1988. By Conservation and Utilization Division. October 1988. III + 135 p., 51 figs., 52 tables. (NTIS No. PB-89-130819/AS).

Status of the Fishery Resources off the Northeastern United States for 1989. By Conservation and Utilization Division. December 1989. IV + 110 p., 50 figs., 93 tables. (NTIS No. PB-90-170622/AS).

Status of the Fishery Resources off the Northeastern United States for 1990. By Conservation and Utilization Division. January 1991. IV + 130 p., 50 figs., 82 tables. (NTIS No. PB-91-213785).

Status of Fishery Resources off the Northeastern United States for 1991. By Conservation and Utilization Division. September 1991. III + 132 p., 6 figs., 72 tables (F/NEC).

Stock Assessment Information for Pollock, *Pollachius virens* (L.), in the Scotian Shelf, Georges Bank, and Gulf of Maine Regions. By Ralph K. Mayo, Stephen H. Clark, and M. Christina Annand. April 1989. VI + 14 p., 6 figs., 14 tables. (NTIS No. PB-90-120676/AS).

Stock Discrimination of Summer Flounder (*Paralichthys dentatus*) in the Middle and South Atlantic Bights: Results of a Workshop. By Michael J. Fogarty, Glenn DeLaney, John W. Gilling, Jr., John C. Poole, Daniel E. Ralph, Paul G. Scarlett, Ronald W. Smith, and Stuart J. Wilk. January 1983. III + 14 p., 2 figs., 3 tables. (NTIS No. PB-83-168856).

Summary of the Physical Oceanographic Processes and Features Pertinent to Pollution Distribution in the Coastal and Offshore Waters of the Northeastern United States, Virginia to Maine. By Merton C. Ingham (ed.), Reed S. Armstrong, J. Lockwood Chamberlin, Steven K. Cook, David G. Mountain, Ronald J. Schlitz, James P. Thomas, James J. Blsaghl, John F. Paul, and Cathrine E. Warsh. December 1982. VI + 166 p., 21 figs., 2 tables. (NTIS No. PB-83-156364).

Summer Distribution of Regulated Species on Georges Bank with Reference to the 1988 Experimental Whiting Fishery. By Frank P. Almelda, Sukwoo Chang, and Thurston S. Burns. September 1989. V + 25 p., 74 figs., 1 table. (NTIS No. PB-90-206525/AS).

Surface and Bottom Temperature Distribution for the Northeast Continental Shelf. By David G. Mountain and Tamara J. Holzwarth. December 1989. III + 32 p., 31 figs. (NTIS No. PB-90-252172/AS).

Survey of Antarctic Fur Seals in the South Shetland Islands, Antarctica, during the 1986-1987 Austral Summer. By John L. Bengtson, Lisa M. Fern, Tero J. Harkonen, Everett G. Schnaner, and Brent S. Stewart. September 1988. VII + 8 p., 1 fig., 3 tables. (NTIS No. PB-89-141303/AS).

Surveys of Breeding Penguins and Other Seabirds in the South Shetland Islands, Antarctica, January-February 1987. By W. David Shuford and Larry B. Spear. September 1988. VII + 27 p., 14 figs., 1 table. (NTIS No. PB-89-141311/AS).

The 1988 Experimental Whiting Fishery: A NMFS/Industry Cooperative Program. By Frank P. Almelda, Thurston S. Burns, and Sukwoo Chang. August 1989. V + 16 p., 9 figs., 11 tables, 1 app. (NTIS No. PB-90-160664/AS).

The Effects of Density Dependent Population Mechanisms on Assessment Advice for the Northwest Atlantic Mackerel Stock. By W.J. Overholtz, S.A. Murawski, W.L. Michaels, and L.M. Dery. October 1988. V + 49 p., 7 figs., 20 tables. (NTIS No. PB-89-151948/AS).

The Shell Disease Syndrome in Marine Crustaceans. By Carl J. Sindermann. February 1989. V + 43 p., 5 figs., 2 tables. (NTIS No. PB-89-162523/AS).

The Shelf/Slope Front South of Nantucket Shoals and Georges Bank as Delineated by Satellite Infrared Imagery and Shipboard Hydrographic and Plankton Observations. By J. B. Colton, Jr., J. L. Anderson, J. E. O'Reilly, C. A. Evans-Zetlin, and H. G. Marshall. May 1985. VI + 22 p., 14 figs. (NTIS No. PB-85-221083/AS).

Trophodynamics of Select Demersal Fishes in the New York Bight. By Frank W. Stelmie and Russell Terranova. July 1991. IV + 11 p., 1 fig., 16 tables. (F/NEC)

USA Historical Catch Data, 1904-82, for Major Georges Bank Fisheries. By Anne M.T. Lange and Joan E. Palmer. May 1985. III + 21 p., 12 figs., 2 tables. (NTIS No. PB-85-233948/AS).

SOUTHEAST FISHERIES SCIENCE CENTER

Our Blue Ocean Is Becoming Pink, Yellow, White, and Green - 2 Pages (F/SEC).

The 5 Sea Turtle Species of the Atlantic and Gulf Coast of the United States. Sea Turtle Program - 2 Pages (F/SEC).

Status of Fishery Resources Off The Southeastern United States for 1991 (F/SEC).

SOUTHWEST FISHERIES SCIENCE CENTER

A global perspective on artificial reefs and fish aggregating devices. In Indo-Pacific Fishery Commission (IPFC), Proceedings of the symposium on Artificial Reefs and Fish Aggregating Devices as Tools for the Management and Enhancement of Marine Fishery Resources, Colombo, Sri Lanka, 14-17 May 1990, p. 251-257. Polovina, J.J. 1991. Regional Office for Asia and the Pacific (RAPA), Food and Agriculture Organization of the United States, Bangkok. (F/SWC)

A summary of the symposium on rockfishes and recommendations for future research. Boehlert, George W., Milton S. Love, J.P. Wourms, and Juro Yamada. 1991. Environ. Biol. Fish. 30(1-2):273-280.

Age, growth, and potential yield for shortbelly rockfish, *Sebastes jordani*. Pearson, D.E., J.E. Hightower, and J. T.H. Chan. 1991. Fish. Bull., U. S. 89(3):403-409.

Assessment of biological impacts of artificial reefs and FADs. In Indo-Pacific Fishery Commission (IPFC), Proceedings of the Symposium on Artificial Reefs and Fish Aggregating Devices as Tools for the Management and Enhancement of Marine Fishery Resources, Colombo, Sri Lanka, 14-17 May 1990, p. 258-263. Polovina, J. J. 1991. Regional Office for Asia and the Pacific (RAPA), Food and Agriculture Organization of the United States, Bangkok. (F/SWC)

Detecting differences in fish diets. Somerton, D.A. 1991. Fish. Bull., U.S. 89:167-169.

Dynamics of growth in the early life history of shortbelly rockfish, *Sebastes jordani*. Laldig, T.E., S. Ralston, and J.R. Bence. 1991. Fish. Bull., U. S. 89(4):611-621.

Ecology of pelagic larvae and juveniles of the genus *Sebastes*. In Boehlert, G.W. and J. Yamada (editors), Rockfishes of the genus *Sebastes*: their reproduction and early life history. Moser, H.G., and G.W. Boehlert. 1991. Environ. Biol. Fish. 30:203-224.

Growth, mortality, and movements of juvenile California halibut, *Paralichthys californicus* in shallow coastal and

bay habitats of San Diego County, California. Kramer, S.H. 1991. Fish. Bull., U.S. 89(2):195-207.

Key to the juvenile rockfishes of central California. In Laldig, Thomas E., and Peter B. Adams (editors), Methods used to identify pelagic juvenile and larval rockfish (genus *Sebastes*) occurring along the coast of central California, p. 59-180. Moreland, S.L., and C.A. Rellily. 1991. U. S. Dep. Commer., NOAA Tech. Memo., (NTIS No. PB-92-142611).

Krill abundance. Hewitt, R. P. 1991. Nature. 353:310.

Life history and ecology of large jacks in undisturbed, shallow, oceanic communities. Sudekum, A.E., J.D. Parrish, R.L. Radtke and S. Ralston. 1991. Fish. Bull., U. S. 89:493-513.

Mortality and recruitment of Pacific sardine, *Sardinops sagax caerulea*, larvae in the California Current. Butler, J.L. 1991. Can. J. Fish. Aquat. Sci. 48:1713-1723.

Research plan for marine turtle fibropapilloma. Results of a December 1990 workshop. Balazs, G.H., and S.G., Pooley (editors). 1991. U.S. Dep. Commerce, NOAA Tech. Memo., (NTIS No. PB-91-170258).

Results of the southern California sportfish economic survey. Thomson, C.J., and S.J. Crooke. 1991. U.S. Dep. Commerce, NOAA Tech. Memo., NOAA-TM-NMFS-SWFSC-164, 264p.

Rockfishes of the genus *Sebastes*: their reproduction and early life history. Boehlert, G.W., and J. Yamada (editors). 1991. Environ. Biol. Fishes 30(1-2):1-288.

Seasonal and annual variability in the diet of California sea lions, *Zalophus californianus*, at San Nicolas Island, California, 1981-86. Lowry, M.S., B.S. Stewart, C.B. Heath, P.K. Yochem, and J.M. Francis. 1991. Fish. Bull., U.S. (Note) 89(2):331-336.

Sea turtle tag center of the Pacific. Balazs, G.H. 1991. Mar. Turtle Newsl. 52:14-15.

Status of Pacific oceanic fishery resources of interest to the USA for 1991. Staff, Southwest Fisheries Science Center. 1991. U. S. Dep. Commerce, NOAA Tech. Memo. (NTIS No. PB-92-128669).

The shallow-water flatfishes of San Diego County. Kramer, S.H. 1991. Calif. Coop. Oceanic. Fish. Invest. Rep. 32:128-142.

Why are there so many kinds of whales and dolphins?
Perrin, W.F. 1991. *BioScience* 41(7):460-461.

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Status and future of spring chinook salmon in the Columbia River Basin--Conservation and enhancement. Proceedings of the Spring Chinook Salmon Workshop, 8-9 November 1989. 130 p. Park, D.L. (convenor). 1990. (PB-91-104984).

Status review of lower Columbia River coho salmon. 94 p. Johnson, O.W., T.A. Flagg, D.J. Maynard, G.B. Milner, and F.W. Waknitz. 1991. (NTIS No. PB-91-218214).

Status review of Snake River fall chinook salmon. 73 p. Waples, R.S., R.P. Jones, Jr., B.R. Beckman, and G.A. Swan. 1991. (NTIS No. PB-91-218222).

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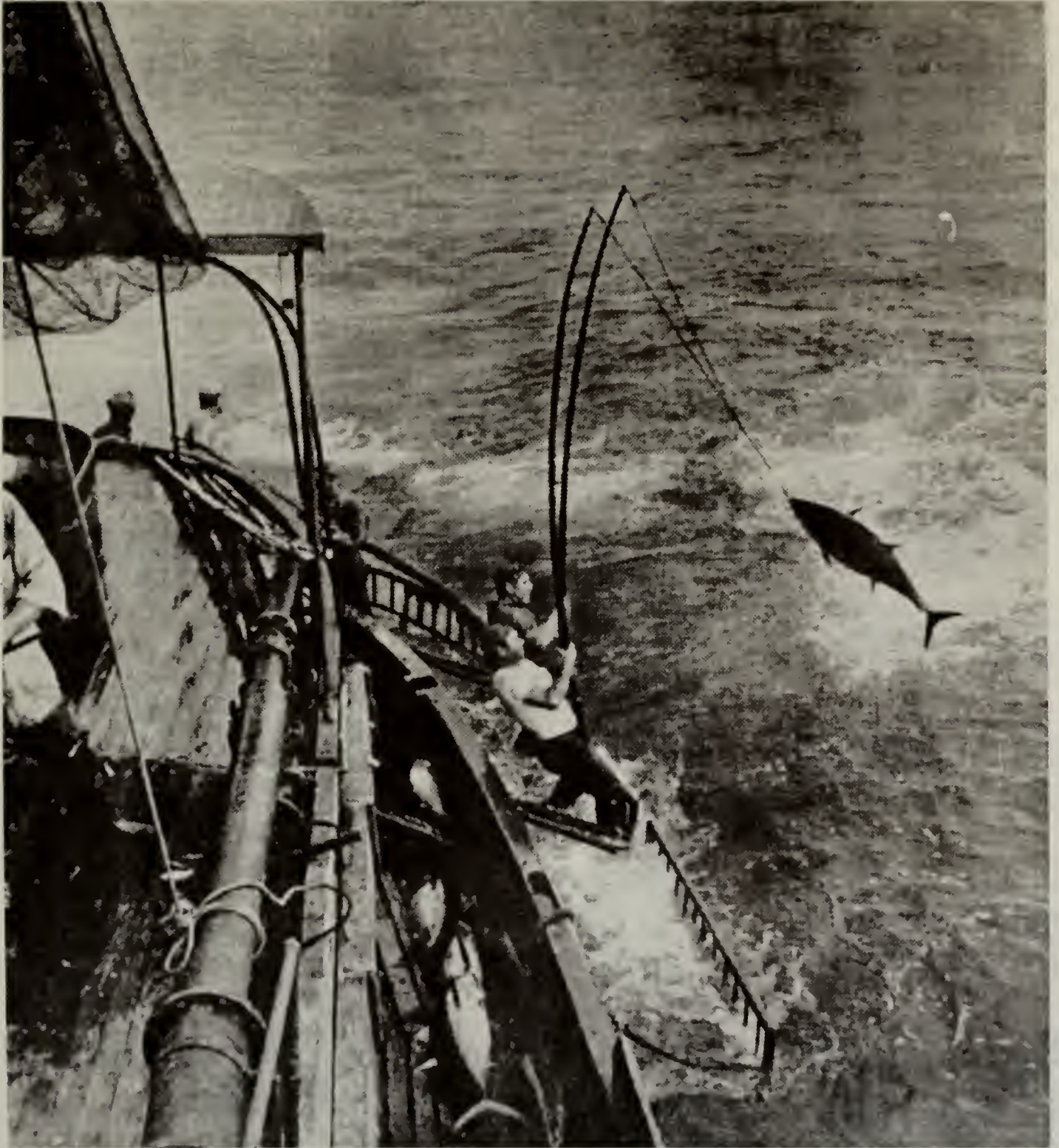
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ANALOG PRODUCTS. These include imitation and simulated crab, lobster, shrimp, scallops, and other fish and shellfish products fabricated from processed fish meat (such as surimi).

BATTER-COATED FISH PRODUCTS. Sticks and portions or other forms of fish or shellfish coated with a batter containing a leavening agent and mixture of cereal products, flavoring, and other ingredients, and partially cooked in hot oil a short time to expand and set the batter.

BOAT, OTHER. Commercial fishing craft not powered by a motor, e.g., rowboat or sailboat, having a capacity of less than 5 net tons. See motorboat.

BREADED FISH PRODUCTS. Sticks and portions or other forms of fish or shellfish coated with a non-leavened mixture containing cereal products, flavorings, and other ingredients. Breaded products are sold raw or partially cooked.

BREADED SHRIMP. Peeled shrimp coated with breading. The product may be identified as fantail (butterfly) and round, with or without tail fins and last shell segment; also known as portions, sticks, steaks, etc., when prepared from a composite unit of two or more shrimp pieces whole shrimp or a combination of both without fins or shells.

BUTTERFLY FILLET. Two skin-on filets of a fish joined together by the belly skin. See filets.

CANNED FISHERY PRODUCTS. Fish, shellfish, or other aquatic animals packed in cans, or other containers, which are hermetically sealed and heat-sterilized. Canned fishery products may include milk, vegetables, or other products. Most, but not all, canned fishery products can be stored at room temperature for an indefinite time without spoiling.

COMMERCIAL FISHERMAN. An individual who derives income from catching and selling living resources taken from inland or marine waters.

CONSUMPTION OF EDIBLE FISHERY PRODUCTS. Estimated amount of commercially landed fish, shellfish, and other

aquatic animals consumed by the civilian population of the United States. Estimates are on an edible-weight basis and have been adjusted for beginning and ending inventories of edible fishery products. Consumption includes U.S. production of fishery products from both domestically caught and imported fish, shellfish, other edible aquatic plants, animals, and imported products and excludes exports and purchases by the U.S. Armed Forces.

CONTINENTAL SHELF FISHERY RESOURCES. These are living organisms of any sedentary species that at the harvestable stage are either (a) immobile on or under the seabed, (b) unable to move except in instant physical contact with the seabed or subsoil of the continental shelf. The Magnuson Act now lists them as certain abalones, surf clam and ocean quahog, queen conch, Atlantic deep-sea red crab, dungeness crab, stone crab, king crabs, snow (tanner) crabs, American lobster, certain corals, and sponges.

CURED FISHERY PRODUCTS. Products preserved by drying, pickling, salting, or smoking; not including canned, frozen, irradiated, or pasteurized products. Dried products are cured by sun or air-drying; pickled or salted products are those products preserved by applying salt, or by pickling (immersing in brine or in a vinegar or other preservative solution); smoked products are cured with smoke or a combination of smoking and drying or salting.

CUSTOMS TERRITORY. Unless otherwise noted, the foreign trade information presented is based on Bureau of the Census data for the Customs territory of the United States. The territory includes the 50 States, District of Columbia, Puerto Rico, and the U.S. Virgin Islands.

EDIBLE WEIGHT. The weight of a seafood item exclusive of bones, offal, etc.

EEZ. See U.S. Exclusive Economic Zone.

EUROPEAN ECONOMIC COMMUNITY (EEC). Belgium and Luxembourg, Denmark, Federal Republic of Germany, Greece, France, Ireland, Italy, Netherlands, Portugal, Spain, and United Kingdom.

EXPORT VALUE. The value reported is generally equivalent to f.a.s. (free alongside ship) value at the U.S. port of export, based on the transaction price, including inland freight, insurance, and other charges incurred in placing the merchandise alongside the carrier at the U.S. port of exportation. The value

excludes the cost of loading, freight, insurance and other charges or transportation cost beyond the port of exportation.

EXVESSEL PRICE. Price received by the harvester for fish, shellfish, and other aquatic plants and animals.

FISH BLOCKS. Regular fish blocks are frozen blocks or slabs of fillets or pieces of fillets cut or sliced from fish. Minced fish blocks are frozen blocks or slabs of minced flesh produced by a meat and bone separating machine.

FISH FILLETS. The sides of fish that are either skinned or have the skin on, cut lengthwise from the backbone. Most types of fillets are boneless or virtually boneless; some may be labeled as "boneless fillets."

FISH MEAL. A high-protein animal feed supplement made by cooking, pressing, drying, and grinding fish or shellfish.

FISH OIL. An oil extracted from body (body oil) or liver (liver oil) of fish and marine mammals; mostly a byproduct of fish meal production.

FISH PORTION. A piece of fish flesh that is generally of uniform size with thickness of 3/8 of an inch or more and differs from a fish stick in being wider or of a different shape. A fish portion is generally cut from a fish block.

FISH SOLUBLES. A water-soluble protein byproduct of fish meal production. Fish solubles are generally condensed to 50 percent solids and marketed as "condensed fish solubles."

FISH STEAK. A cross-section slice cut from a large dressed fish. A steak is usually about 3/4 of an inch thick.

FISH STICK. An elongated piece of breaded fish flesh weighing not less than 3/4 of an ounce and not more than 1-1/2 ounces with the largest dimension at least three times that of the next largest dimension. A fish stick is generally cut from a fish block.

FISHERY MANAGEMENT PLAN (FMP). A plan developed by a Regional Fishery Management Council, or the Secretary of Commerce under certain circumstances,

to manage a fishery resource in the U.S. EEZ pursuant to the MFCMA (Magnuson Act).

FISHING CRAFT, COMMERCIAL. Boats and vessels engaged in capturing fish, shellfish, and other aquatic plants and animals for sale.

FULL-TIME COMMERCIAL FISHERMAN. An individual who receives more than 50 percent of their annual income from commercial fishing activities, including port activity, such as vessel repair and re-rigging.

GROSS REGISTERED TONNAGE (GRT). The gross registered tonnage of a vessel is the internal cubic capacity of all space in and on the vessel that is permanently enclosed, with the exception of certain permissible exemptions. GRT is expressed in tons of 100 cubic feet.

GROUND FISH. Broadly, fish that are caught on or near the sea floor. The term includes a wide variety of bottomfishes, rockfishes, and flatfishes. However, NMFS sometimes uses the term in a narrower sense. In "Fisheries of the United States," the term applies to the following species--Atlantic and Pacific: cod, hake, ocean perch, and pollock; cusk; and haddock.

IMPORT VALUE. Value of imports as appraised by the U.S. Customs Service according to the Tariff Act of 1930, as amended. It may be based on foreign market value, constructed value, American selling price, etc. It generally represents a value in a foreign country, and therefore excludes U.S. import duties, freight, insurance, and other charges incurred in bringing the merchandise to the United States.

IMPORT WEIGHT. The weights of individual products as exported, i.e., fillets, steaks, whole, headed, etc.

INDUSTRIAL FISHERY PRODUCTS. Items processed from fish, shellfish, or other aquatic plants and animals that are not consumed directly by humans. These items contain products from seaweeds, fish meal, fish oils, fish solubles, pearl essence, shark and other aquatic animal skins, and shells.

JOINT VENTURE. An operation authorized under the MFCMA (Magnuson Act) in which a permitted foreign vessel receives fish in the U.S. EEZ from a U.S. vessel. The fish received from the U.S. vessel are part of the U.S. harvest.

LANDINGS, COMMERCIAL. Quantities of fish, shellfish, and other aquatic plants and animals brought ashore and sold. Landings of fish may be in terms of round (live) weight or dressed weight. Landings of crustaceans are generally on a live-weight basis except for shrimp which may be on a heads-on or heads-off basis. Mollusks are generally landed with the shell on, but for some species only the meats are landed, such as sea scallops. Data for all mollusks are published on a meat-weight basis.

MAGNUSON FISHERY CONSERVATION AND MANAGEMENT ACT, Public Law 94-265, as amended.

The Magnuson Act provides a national program for the conservation and management of fisheries to allow for an optimum yield (OY) on a continuing basis and to realize the full potential of the Nation's fishery resources. It established the U.S. Exclusive Economics Zone (EEZ) (formerly the FCZ - Fishery Conservation Zone) and a means to control foreign and certain domestic fisheries through PMPs and FMPs. Within the U.S. EEZ, the United States has exclusive management authority over fish (meaning finfish, mollusks, crustaceans, and all other forms of marine animal and plant life other than marine mammals, birds, and highly migratory species of tuna). The Magnuson Act provides further exclusive management authority beyond the U.S. EEZ for all continental shelf fishery resources and all anadromous species throughout the migratory range of each such species, except during the time they are found within any foreign nation's territorial sea or fishery conservation zone (or the equivalent), to the extent that such a sea or zone is recognized by the United States.

MARINE RECREATIONAL FISHING. Fishing for pleasure, amusement, relaxation, or home consumption. If part or all of the catch is sold, the monetary returns constitute an insignificant part of the person's income.

MARINE RECREATIONAL CATCH. Quantities of finfish, shellfish and other living aquatic organisms caught, but not necessarily brought ashore, by marine recreational fisherman.

MARINE RECREATIONAL FISHERMEN. Those people who fish in marine waters primarily for recreational purposes. Their catch is primarily for home consumption, although occasionally a part or all of their catch may be sold and enter commercial channels. This definition is used in the NMFS Marine Recreational Fishery Statistics Survey, and is not intended to represent a NMFS policy on the sale of angler-caught fish.

MAXIMUM SUSTAINABLE YIELD (MSY). MSY from a fishery is the largest annual catch or yield in terms of weight of fish caught by both commercial and recreational fishermen that can be taken continuously from a stock under existing environmental conditions. A determination of MSY, which should be an estimate based upon the best scientific information available, is a biological measure necessary in the development of optimum yield.

METRIC TONS. A measure of weight equal to 1,000 kilograms, 0.984 long tons, 1.1023 short tons, or 2,204.6 pounds.

MOTORBOAT. A motor-driven commercial fishing craft having a capacity of less than 5 net tons, or not officially documented by the Coast Guard. See "boat, other."

NORTHWEST ATLANTIC FISHERIES ORGANIZATION (NAFO).

This convention, which entered into force January 1, 1979, replaces ICNAF. NAFO provides a forum for continued multilateral scientific research and investigation of fishery resources that occur beyond the limits of coastal nations' fishery jurisdiction in the northwest Atlantic, and will ensure consistency between NAFO management measures in this area and those adopted by the coastal nations within the limits of their fishery jurisdiction.

OPTIMUM YIELD (OY). In the MFCMA (Magnuson Act), OY with respect to the yield from a fishery, is the amount of fish that (1) will provide the greatest overall benefit to the United States, with particular reference to food production and recreational opportunities; and (2) is prescribed as such on the basis of maximum sustainable yield from such fishery, as modified by any relevant ecological, economic, or social factors.

PACKAGED FISH. A term used in NMFS publications prior to 1972 to designate fresh or frozen raw fish fillets and steaks.

PART-TIME COMMERCIAL FISHERMAN. An individual who receives less than 50 percent of their annual income from commercial fishing activities.

PER CAPITA CONSUMPTION. Consumption of edible fishery products in the United States divided by the total civilian population. In calculating annual per capita consumption, estimates of the civilian resident population of the United States on July 1 of each year are used. These estimates are taken from current

population reports, series P-25, published by the U.S. Bureau of the Census.

PER CAPITA USE. The use of all fishery products, both edible and nonedible, in the United States divided by the total population of the United States.

PRELIMINARY FISHERY MANAGEMENT PLAN (PMP). The Secretary of Commerce prepares a PMP whenever a foreign nation with which the United States has made a Governing International Fishery Agreement (GIFA) submits an application to fish in a fishery not managed by an FMP. A PMP is replaced by an FMP as soon as the latter is implemented. A PMP applies only to foreign fishing.

RETAIL PRICE. The price of fish and shellfish sold to the final consumer by food stores and other retail outlets.

ROUND (LIVE) WEIGHT. The weight of fish, shellfish, or other aquatic plants and animals as taken from the water; the complete or full weight as caught. The tables on world catch found in this publication include, in the case of mollusks, the weight of both the shells and the meats, whereas the tables on U.S. landings include only the weight of the meats.

SURIMI. Minced fish meat (usually Alaska pollock) which has been washed to remove fat and undesirable matters (such as blood, pigments, and odorous substances), and mixed with cryoprotectants, such as sugar and/or sorbitol, for a good frozen shelf life.

TOTAL ALLOWABLE LEVEL OF FOREIGN FISHING (TALFF). The TALFF, if any, with respect to any fishery subject to the exclusive fishery management authority of the United States, is that portion of the optimum yield of

such fishery which will not be harvested by vessels of the United States, as determined by provisions of the MFCMA.

U.S. EXCLUSIVE ECONOMIC ZONE (EEZ). The MFCMA (Magnuson Act) defines this zone as contiguous to the territorial sea of the United States and extending seaward 200 nautical miles measured from the baseline from which the territorial sea is measured. This was formerly referred to as the FCZ (Fishery Conservation Zone).

U.S.-FLAG VESSEL LANDINGS. Includes landings by all U.S. fishing vessels regardless of where landed as opposed to landings at ports in the 50 United States. These include landings at foreign ports, U.S. territories, and foreign vessels in the U.S. FCZ under joint venture agreements. U.S. law prohibits vessels constructed or registered in foreign countries to land fish catches at U.S. ports.

U.S. TERRITORIAL SEA. A zone extending 3 nautical miles from shore for all states except Texas and the Gulf Coast of Florida where the seaward boundary is 3 marine leagues (9 nautical miles).

USE OF FISHERY PRODUCTS. Estimated disappearance of the total supply of fishery products, both edible and nonedible, on a round-weight basis without considering beginning or ending stocks, exports, military purchases, or shipments to U.S. territories.

VESSEL. A commercial fishing craft having a capacity of 5 net tons or more. These craft are either enrolled or documented by the U.S. Coast Guard and have an official number assigned by that agency.

WHOLESALE FISH AND SHELLFISH PRICES. Those prices received at principal fishery markets by primary wholesalers (processors, importers, and brokers) for customary quantities, free on board (f.o.b.) warehouse.



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NATIONAL SEAFOOD INSPECTION PROGRAM. The U.S. Department of Commerce (USDC), National Marine Fisheries Service, a part of the National Oceanic and Atmospheric Administration, conducts a voluntary seafood inspection program on a fee-for-service basis. Services provided by the program include vessel and plant sanitation, product inspection and grading, label reviews product specification reviews, laboratory analyses, training, education and information. Inspection and certification services are available nationwide and in U.S. territories for all interested parties. Consultative services are provided in foreign countries. Inspection and certification services are also provided for imported and exported products.

USERS OF INSPECTION SERVICES. The users of the voluntary seafood inspection service include vessel owners, processors, distributors, brokers, retailers, food service operators, exporters, importers, and those who have a financial interest in buying and selling seafood products. The military requires USDC inspected products be purchased for its troop feeding program. The U.S. Department of Agriculture also recommends that USDC inspected products be purchased for its food feeding programs. The **USDC APPROVED LIST OF FISH ESTABLISHMENTS AND PRODUCTS**, published bi-annually, provides a listing of products and participants who contract with USDC. Currently thirteen states and four commodity groups of the U.S. Department of Agriculture maintain agreements with the USDC for the cross-licensing of food inspectors to assist in the inspection and certification of fishery products.

USDC INSPECTION MARKS. The official marks authorized for use on products in the USDC inspection program are found in the Code of Federal Regulations, Title 50. These marks designate the level and the type of inspection performed by the federal inspector. The marks can be used in advertising and labeling under the guidelines provided by the Inspection Services

Division and in accordance with federal and state regulations regarding advertising and labeling. Products bearing the USDC official marks have been certified as being safe, wholesome, and properly labeled.



"US GRADE A MARK." The U.S. GRADE A mark signifies that a product has been processed under federal inspection in an approved facility and meets the established level of quality of an existing U.S. grade standard. The U.S. Grade A mark indicates that the product is of high quality, uniform in size, practically free from blemishes and defects, in excellent condition and possessing good flavor and odor.



"PACKED UNDER FEDERAL INSPECTION" MARK. The PUFI mark or statement signifies that the product has been inspected in an approved facility by a federal inspector and was found to be safe, wholesome and properly labeled according to approved specifications or criteria.



LOT INSPECTION MARKS. Products inspected on a lot inspection basis, whether in an approved facility or in a warehouse, cold storage facility or dock, by a federal inspector, can bear an official lot inspection mark. The **OFFICIALLY SAMPLED** mark signifies that the

products were officially sampled for wholesomeness, condition and other factors as requested. The **ACCEPTED PER SPECIFICATIONS** mark identifies products which were officially sampled and inspected to conform to approved specifications or criteria.

FDA/NOAA VOLUNTARY SEAFOOD PROGRAM. FDA and NOAA are developing a new joint seafood inspection program based on the Hazard Analysis Critical Control Point (HACCP) concept. The program will be voluntary, on a fee-for-service basis, and extend ultimately from harvest to the table. It will include processors, retail and foreign sectors and directly involve federal, state, local and foreign governments. The program will offer product and participant certification and allow the use of a mark to signify participation in the HACCP-based program.

FOR FURTHER INFORMATION:

Northeast Inspection Branch
National Marine Fisheries Service
One Blackburn Drive
Gloucester, MA 01930
(508) 281-9292 (FAX: 281-9333)

Southeast Inspection Branch
National Marine Fisheries Service
Duval Building
9450 Koger Blvd.
St. Petersburg, FL 33702
(813) 893-3155 (FAX: 893-3111)

Western Inspection Branch
National Marine Fisheries Service
5600 Rickenbacker Road
Building No. 7
Bell, CA 90201
(213) 894-5369 (FAX: 894-5398)

National Inspection Laboratory
National Marine Fisheries Service
3209 Frederic St.
P.O. Drawer 1207
Pascagoula, MS 39567
(601) 762-7402 (FAX: 769-9200)

Inspection Services Division
National Marine Fisheries Service
1335 East-West Highway
Silver Spring, MD 20910
(301) 713-2355 (FAX: 588-4853)

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